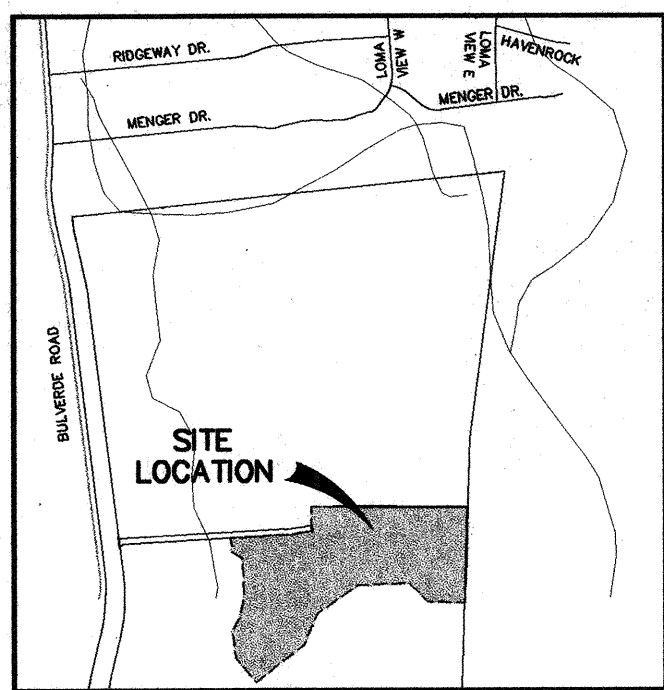
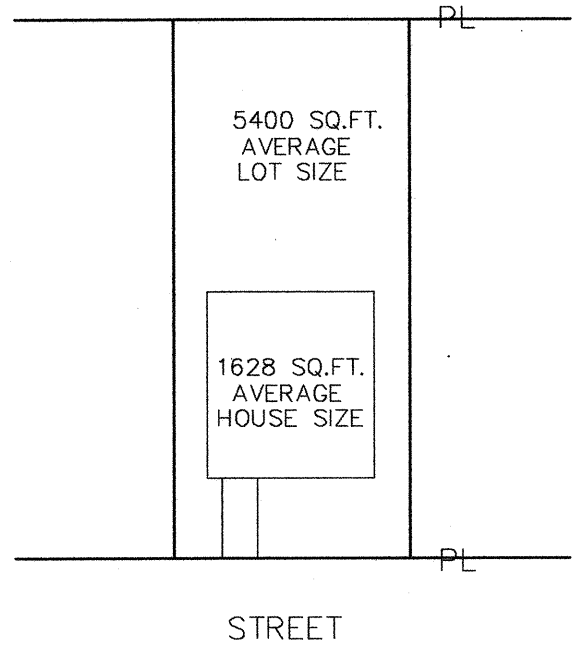


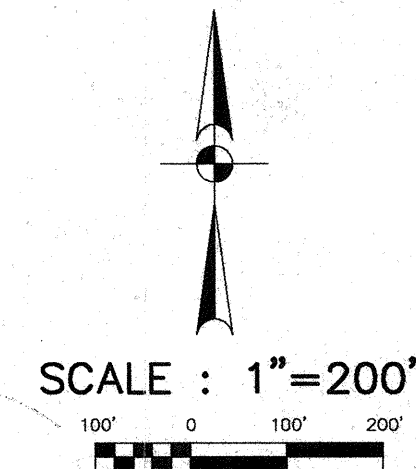
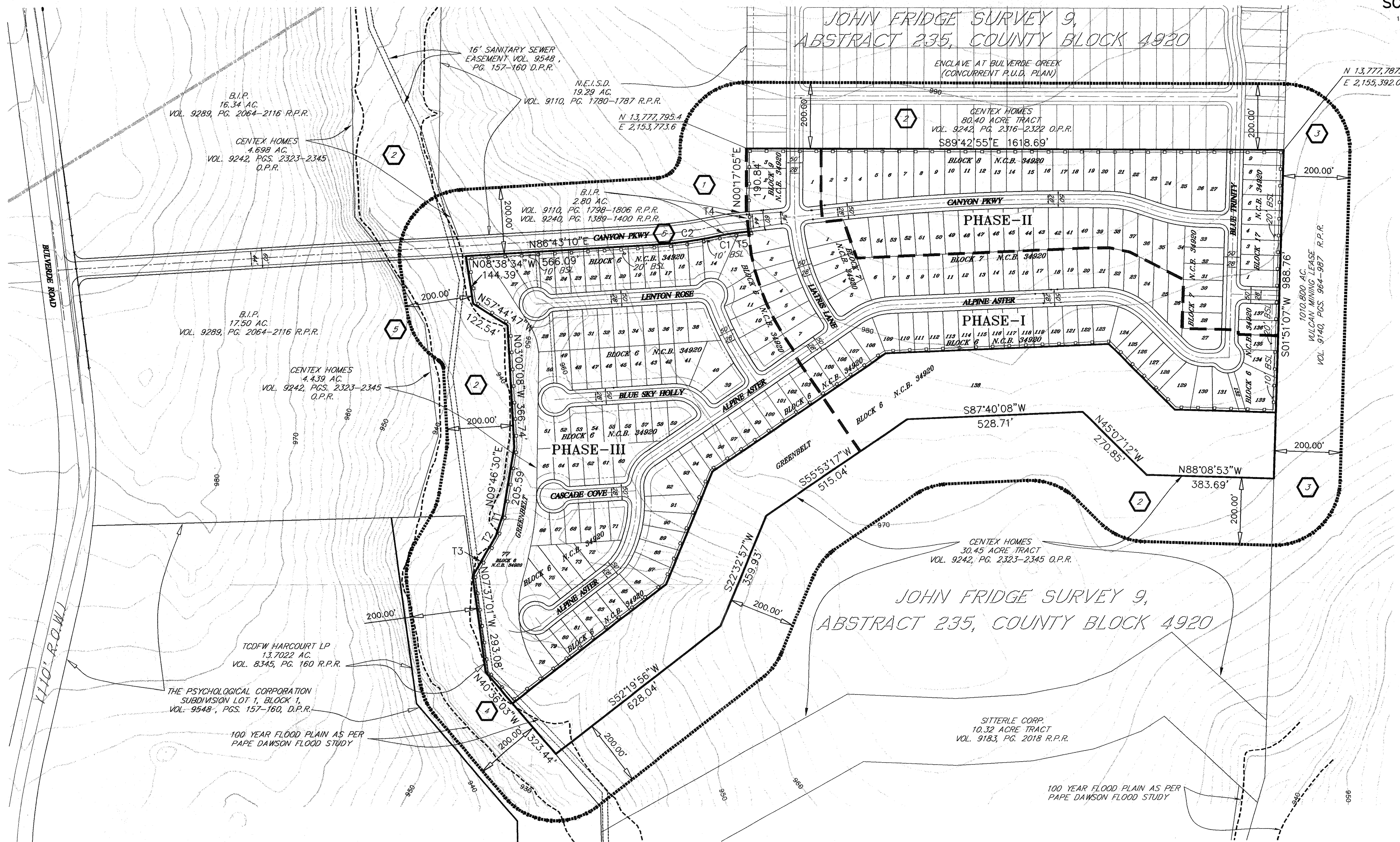
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LOCATION MAP  
SCALE: 1"=2000'

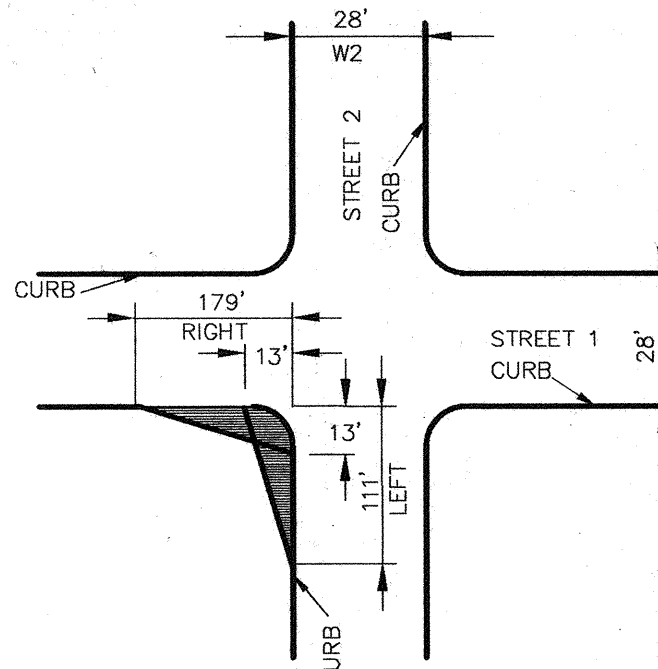


TYPICAL LOT DETAIL  
NOT TO SCALE



ALL CORNER LOTS WILL COMPLY WITH THE  
CLEAR VISION AREA REQUIREMENTS OF SECTION  
35-3339 OF THE UNIFIED DEVELOPMENT CODE.  
(TWO WAY TRAFFIC)  
CURB LENGTHS: LEFT-EQUATION A  
RIGHT-EQUATION D

$$L = \frac{13 \cdot (SD - 1)^2}{13 + W/2 + K_A} = 4 = 111 \text{ FT.}$$
$$R = 0.65 \cdot (SD - 1) \cdot (W/2 + K_D) = 179 \text{ FT.}$$
$$ISD(1) = 480 \text{ FT. } W=40 \text{ FT. } K_A = 7 \text{ FT. } K_D = 2 \text{ FT.}$$
$$ISD(2) = 300 \text{ FT. } W=30 \text{ FT.}$$



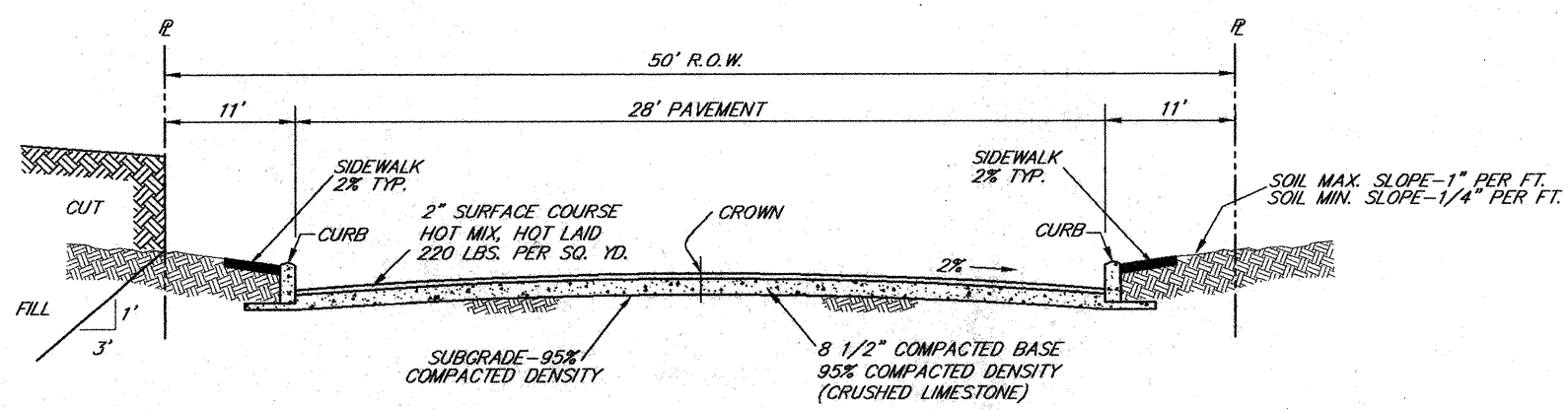
CLEAR VISION AREA CALCULATION  
NOT TO SCALE

LEGEND:

- PUD/LIMITS
  - 200' R.O.S.
  - FLOOD PLAIN LIMITS
  - LOT OWNERSHIP KEY
  - 8' FENCE
  - PHASE LIMITS
  - BSL = BUILDING SETBACK LINE
- D&P = DEED AND PLAT RECORDS OF BEXAR COUNTY, TEXAS  
O.P.R. = OFFICIAL PUBLIC RECORDS OF REAL PROPERTY OF BEXAR COUNTY, TEXAS  
D.R. = DEED RECORDS OF BEXAR COUNTY, TEXAS

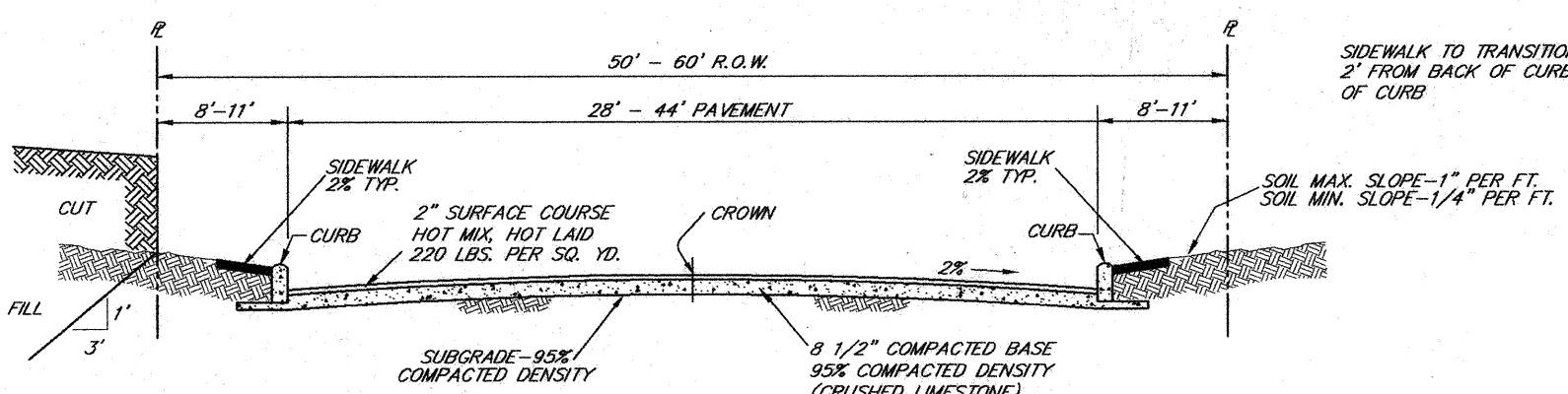
NOTES:

1. WATER SERVICE TO BE PROVIDED BY SAWS
2. SANITARY SEWER SERVICE TO BE PROVIDED BY SAWS
3. GAS AND ELECTRIC TO BE PROVIDED BY OPS
4. TELEPHONE SERVICE TO BE PROVIDED BY S.W.B. TELE.
5. CA. TV SERVICE TO BE PROVIDED BY TIME/WARNER CABLE.
6. ALL ACRES SUBJECT TO CHANGE WITHOUT NOTICE.
7. ALL SREETS AND GREENBELTS ARE DESIGNATED AS SANITARY SEWER, DRAINAGE, GAS, ELECTRIC, TELEPHONE, WATER, AND CATV. EASEMENTS.
8. ALL CORNER LOTS WILL COMPLY WITH THE CLEAR VISION AREA (UDC SEC. 353339)
9. ALL LAND USE IS DETACHED SINGLE FAMILY RESIDENTIAL.
10. ZONING IS P-1, R-5, EARZ
11. SPECIFIC LOT DIMENSIONS WILL BE SHOWN ON PLATS.
12. ALL STREETS ARE PUBLIC.
13. THE BEARINGS ARE BASED ON THE NORTH AMERICAN DATUM OF 1983, FROM STATE PLANE COORDINATES ESTABLISHED FOR THE TEXAS SOUTH CENTRAL ZONE



LOCAL STREET SECTION  
NOT TO SCALE

NOTE:  
FOR PAVEMENT DESIGN  
SEE GEOTECHNICAL  
ENGINEERING REPORT



COLLECTOR STREET TRANSITION SECTION  
NOT TO SCALE

NOTE:  
FOR PAVEMENT DESIGN  
SEE GEOTECHNICAL  
ENGINEERING REPORT

CURVE TABLE					
CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING
C1	470.00'	52.22'	26.14'	52.19'	S80°50'53"W 06°21'58"
C2	1275.00'	201.49'	100.95'	201.28'	N82°11'32"E 09°03'16"

LINE TABLE	
LINE	BEARING
T1	66.87' N18°15'52"E
T2	32.87' N29°46'50"E
T3	106.61' N30°23'10"E
T4	60.00' N05°58'08"W
T5	35.69' N84°01'52"E

PUD PLAN NO: \_\_\_\_\_  
APPROVED BY THE PLANNING COMMISSION OF THE  
CITY OF SAN ANTONIO, TEXAS.

CHAIRPERSON \_\_\_\_\_ DATE: \_\_\_\_\_  
SECRETARY \_\_\_\_\_ DATE: \_\_\_\_\_

OWNER/DEVELOPER:  
PULTE HOMES OF TEXAS  
823 NAKOMA DRIVE EAST, STE. 101  
SAN ANTONIO, TEXAS 78216  
PHONE: 210-496-2066 FAX: 210-494-9076

DENSITY AND OPEN SPACE RATIOS

PROPOSED DENSITY	=	4.1 UNITS PER ACRE
TOTAL ACRES	=	56.40 ACRES
TOTAL # LOTS PHASE-I	=	69 (18.70 AC.)
TOTAL # LOTS PHASE-II	=	65 (11.44 AC.)
TOTAL # LOTS PHASE-III	=	95 (26.26 AC.)
TOTAL:		229 (56.40 AC.)
AVERAGE HOME SIZE		1628 SF

OPEN SPACE TO RATIO & DENSITY TABLE

	SQ. FT.	ACREAGE	PERCENTAGE
TOTAL GROSS AREA	2,456,794	56.40	N/A
BUILDING COVERAGE AREA	372,812	8.56	15.2%
OTHER (STREET PAVEMENT, WALKS, DRIVEWAYS)	361,985	8.31	14.7%
OPEN SPACE	1,721,997	39.53	70.1%

ROADP NO. 706A	APPROVAL DATE: 1-18-02	PUD NO. _____	APPROVAL DATE: _____

REVISIONS:

PAPE-DAWSON ENGINEERS

BULVERDE RIDGE  
P.U.D./PEDESTRIAN PLAN

JOB NO. 513665  
DATE MAY 8, 2002  
DESIGNER JDC  
CHECKED RG DRAWN GP  
SHEET 1 OF 1

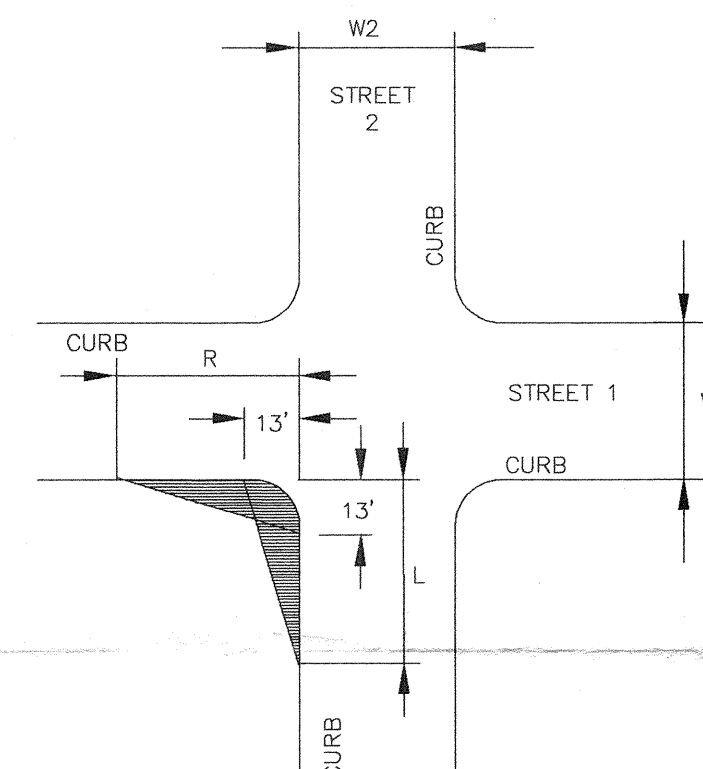
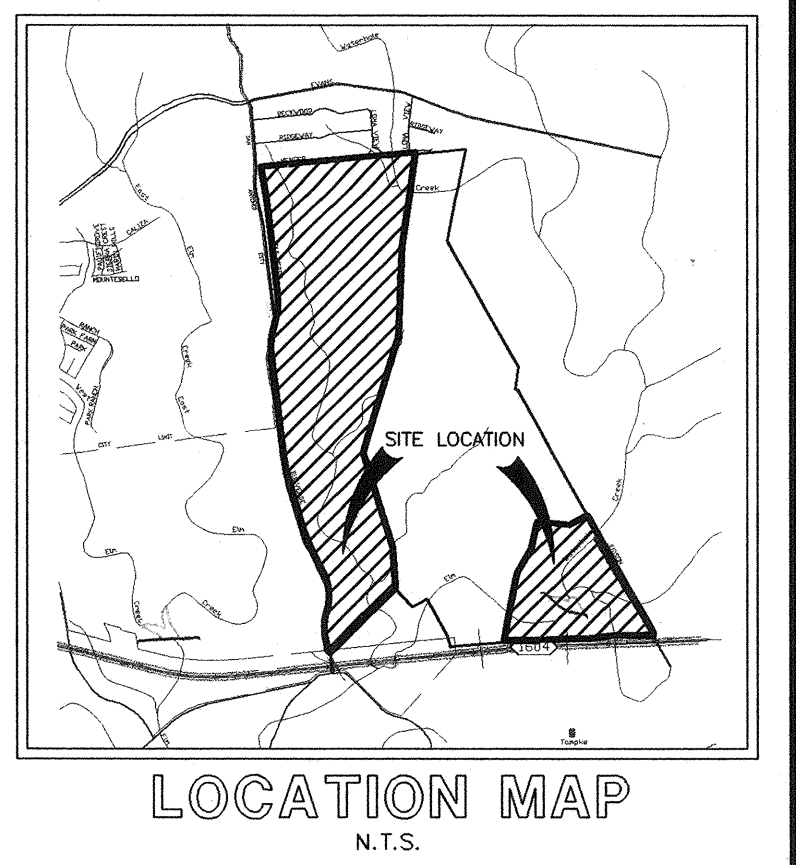
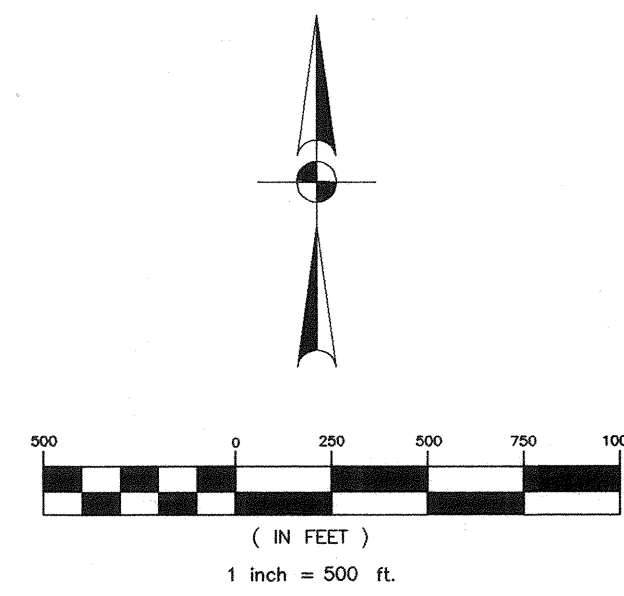
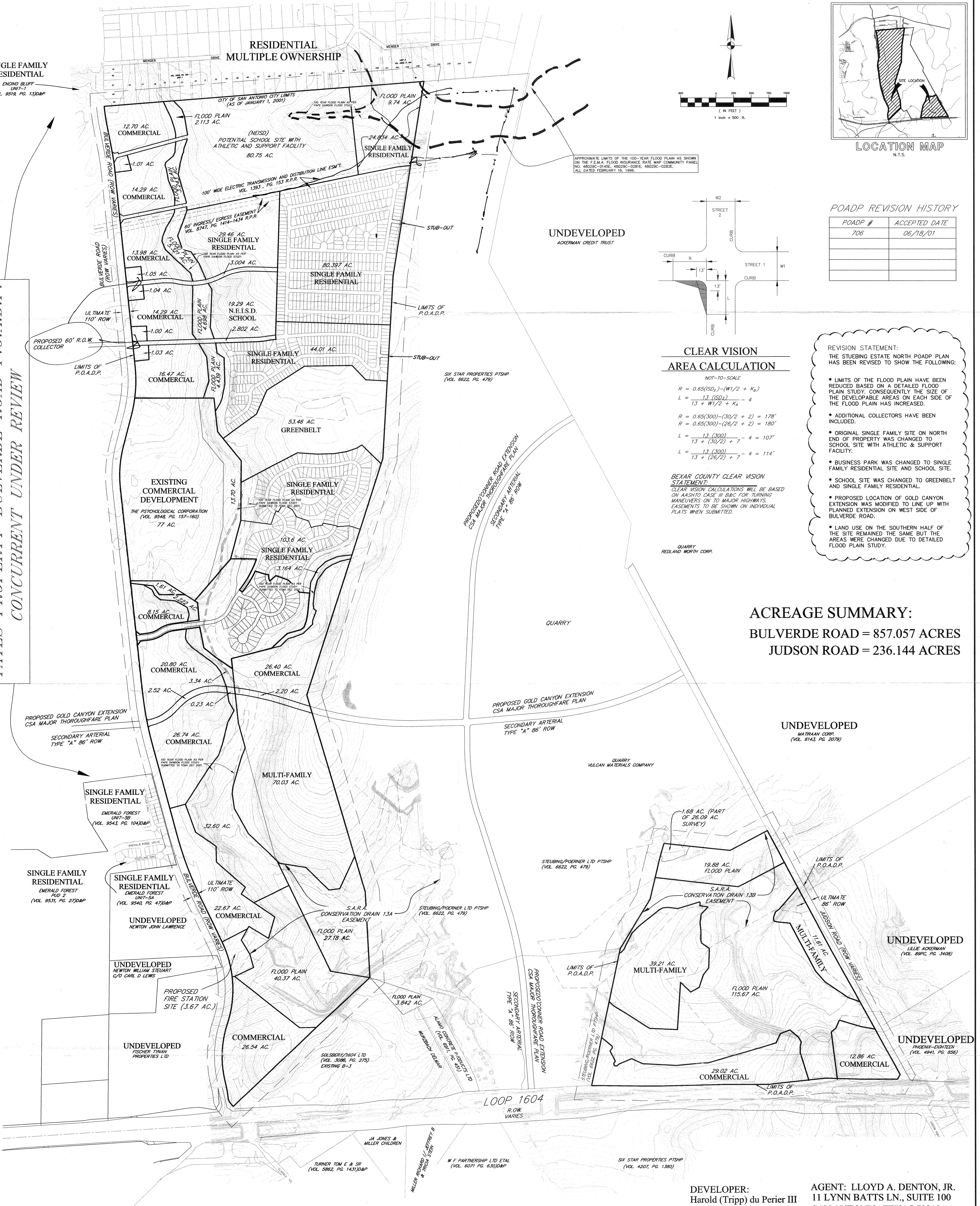
706A



SINGLE FAMILY  
RESIDENTIAL  
ENGINEERING  
UNIT-1  
(VOL. 9518, PG. 13)D&P

YATES PROPERTY-BULVERDE ROAD P.O.A.D.P.  
CONCURRENT UNDER REVIEW

## RESIDENTIAL MULTIPLE OWNERSHIP



### POADP REVISION HISTORY

POADP #	ACCEPTED DATE
706	06/18/01

### CLEAR VISION AREA CALCULATION

NOT-TO-SCALE

$$R = 0.65(150) - (W1/2 + K_0)$$
$$L = \frac{13(150)}{13 + W1/2 + K_0} - 4$$
$$R = 0.65(300) - (30/2 + 2) = 178'$$
$$L = \frac{13(300)}{13 + (30/2) + 7} - 4 = 107'$$
$$R = 0.65(300) - (26/2 + 2) = 180'$$
$$L = \frac{13(300)}{13 + (26/2) + 7} - 4 = 114'$$

BEXAR COUNTY CLEAR VISION  
STATEMENT:  
CLEAR VISION CALCULATIONS WILL BE BASED  
ON AASHTO CASE III B&C FOR TURNING  
MANEUVERS ON TO MAJOR HIGHWAYS.  
EASEMENTS TO BE SHOWN ON INDIVIDUAL  
PLATS WHEN SUBMITTED.

REVISION STATEMENT:  
THE STEUBING ESTATE NORTH POADP PLAN  
HAS BEEN REVISED TO SHOW THE FOLLOWING:

- LIMITS OF THE FLOOD PLAIN HAVE BEEN REDUCED BASED ON A DETAILED FLOOD PLAIN STUDY. CONSEQUENTLY THE SIZE OF THE DEVELOPABLE AREAS ON EACH SIDE OF THE FLOOD PLAIN HAS INCREASED.
- ADDITIONAL COLLECTORS HAVE BEEN INCLUDED.
- ORIGINAL SINGLE FAMILY SITE ON NORTH END OF PROPERTY WAS CHANGED TO SCHOOL SITE WITH ATHLETIC & SUPPORT FACILITY.
- BUSINESS PARK WAS CHANGED TO SINGLE FAMILY RESIDENTIAL SITE AND SCHOOL SITE.
- SCHOOL SITE WAS CHANGED TO GREENBELT AND SINGLE FAMILY RESIDENTIAL.
- PROPOSED LOCATION OF GOLD CANYON EXTENSION WAS MODIFIED TO LINE UP WITH PLANNED EXTENSION ON WEST SIDE OF BULVERDE ROAD.
- LAND USE ON THE SOUTHERN HALF OF THE SITE REMAINED THE SAME BUT THE AREAS WERE CHANGED DUE TO DETAILED FLOOD PLAIN STUDY.

ACREAGE SUMMARY:  
BULVERDE ROAD = 857.057 ACRES  
JUDSON ROAD = 236.144 ACRES

UNDEVELOPED  
MATRAAN CORP.  
(VOL. 8143, PG. 2078)

UNDEVELOPED  
LILLIE ACKERMAN  
(VOL. 889C, PG. 3408)

UNDEVELOPED  
PHOENIA-EIGHTEEN  
(VOL. 4941, PG. 856)

DEVELOPER:  
Harold (Tripp) du Perier III  
c/o BITTERBLUE INC.

AGENT: LLOYD A. DENTON, JR.  
11 LYNN BATTS LN., SUITE 100  
SAN ANTONIO, TEXAS 78218  
PHONE: (210) 828-6131  
FAX: (210) 828-6137

PAPE-DAWSON ENGINEERS  
505 EAST RAMBLE | SAN ANTONIO TEXAS 78216 | PHONE: 210.375.9000  
FAX: 210.375.9000

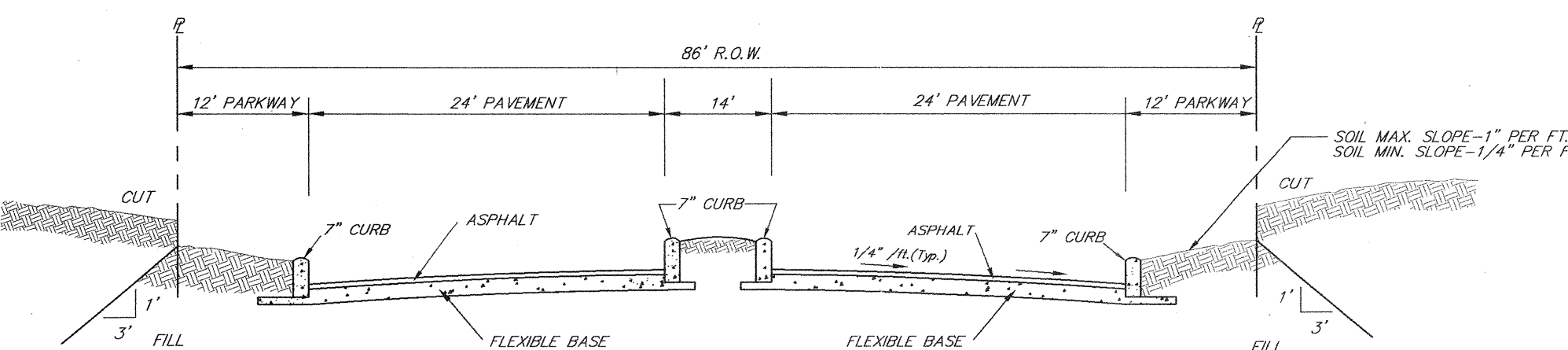
## STEUBING ESTATE NORTH

AMENDED P.O.A.D.P.  
PLAN No. 706A

JOB NO. 5136.01 DATE: DEC. 11, 2001  
JAN. 23, 2002 (REVISED)

### NOTES:

- WATER SERVICE TO BE PROVIDED BY SAWS
- SANITARY SEWER SERVICE TO BE PROVIDED BY SAWS
- GAS AND ELECTRIC TO BE PROVIDED BY CPS
- TELEPHONE SERVICE TO BE PROVIDED BY S.W.B. TELE. CO.
- CA. TV SERVICE TO BE PROVIDED BY TIME/WARNER CABLE.
- ALL ACREAGES SUBJECT TO CHANGE WITHOUT NOTICE
- ALL STREETS SHALL BE SECONDARY ARTERIAL UNLESS OTHERWISE SHOWN.



### TYPICAL STREET SECTION

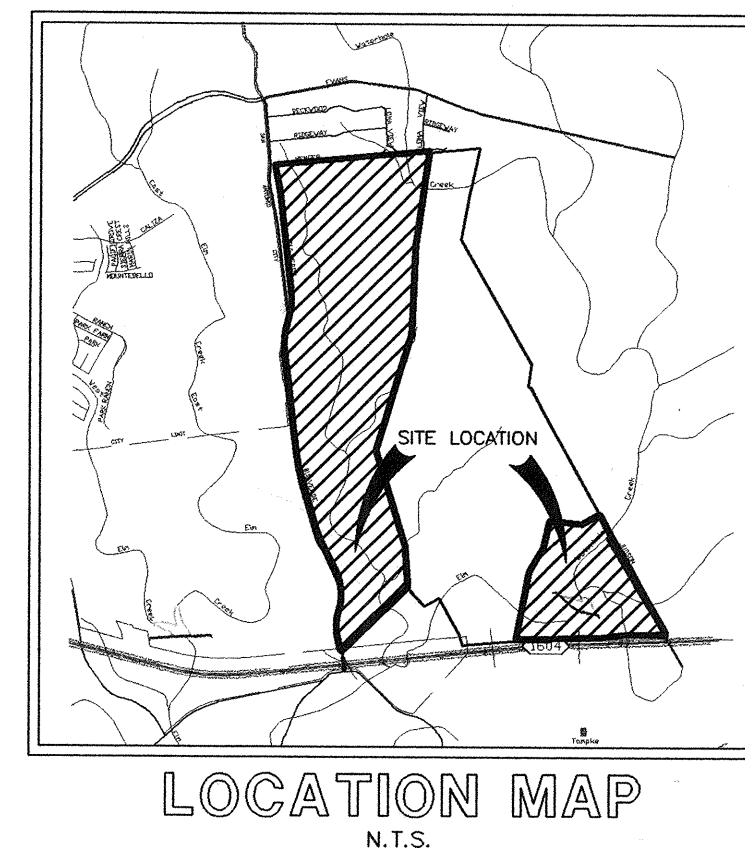
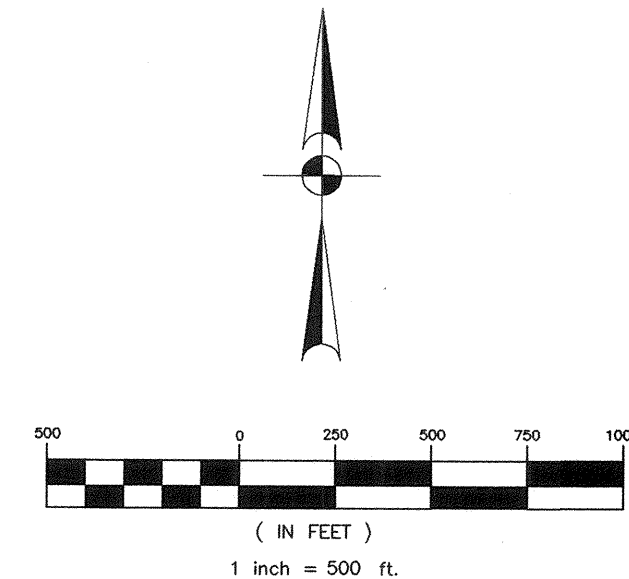
NOT-TO-SCALE  
(FOR PROPOSED GOLD CANYON AND O'CONNOR RD. EXTENSION)

NOTE:  
FOR PAVEMENT DESIGN SECTION  
SEE GEOTECHNICAL ENGINEERING  
REPORT



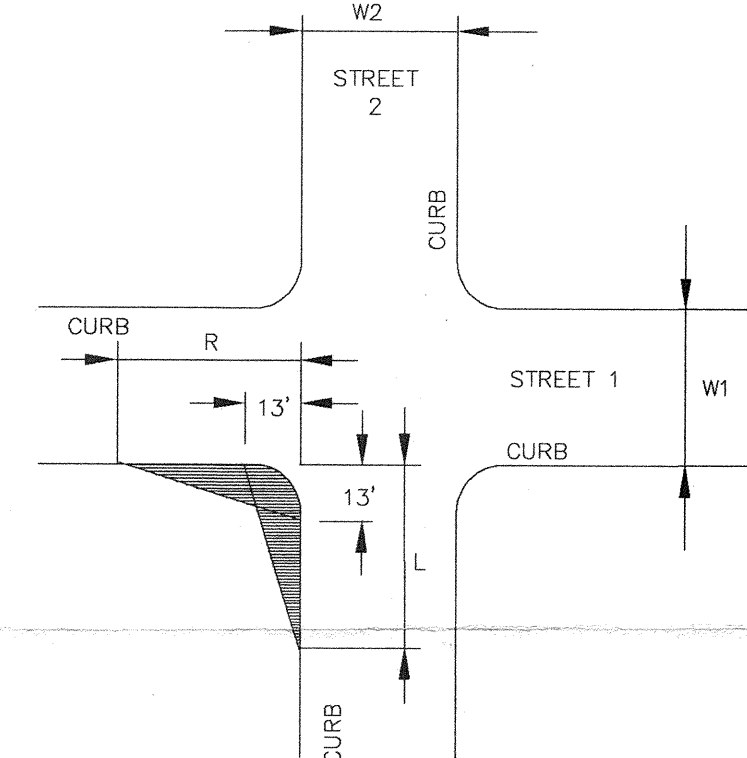
SINGLE FAMILY RESIDENTIAL  
ENCINO BLUFF  
UNIT-1  
(VOL. 9519, PG. 13)D&P

## RESIDENTIAL MULTIPLE OWNERSHIP



APPROXIMATE LIMITS OF THE 100-YEAR FLOOD PLAIN AS SHOWN ON THE F.E.M.A. FLOOD INSURANCE RATE MAP COMMUNITY PANEL NO. 48029C-01-04L, 48029C-02-01L, 48029C-02-02L, 48029C-02-03L, ALL DATED FEBRUARY 15, 1990.

UNDEVELOPED  
ACKERMAN CREDIT TRUST



### POADP REVISION HISTORY

POADP #	ACCEPTED DATE
706	06/18/01

### CLEAR VISION AREA CALCULATION

NOT-TO-SCALE

$$R = 0.65(SD_0) - (W1/2 + K_0)$$

$$L = \frac{13(SD_0)}{13 + W1/2 + K_0} - 4$$

$$R = 0.65(300) - (30/2 + 2) = 178'$$

$$R = 0.65(300) - (26/2 + 2) = 180'$$

$$L = \frac{13(300)}{13 + (30/2) + 7} - 4 = 107'$$

$$L = \frac{13(300)}{13 + (26/2) + 7} - 4 = 114'$$

### BEAR COUNTY CLEAR VISION STATEMENT:

CLEAR VISION CALCULATIONS WILL BE BASED ON AASHTO CASE III BAC FOR TURNING MANEUVERS ON TO MAJOR HIGHWAYS. EASEMENTS TO BE SHOWN ON INDIVIDUAL PLATS WHEN SUBMITTED.

REVISION STATEMENT:  
THE STEUBING ESTATE NORTH POADP PLAN HAS BEEN REVISED TO SHOW THE FOLLOWING:

- LIMITS OF THE FLOOD PLAIN HAVE BEEN REDUCED BASED ON A DETAILED FLOOD PLAIN STUDY. CONSEQUENTLY THE SIZE OF THE DEVELOPABLE AREAS ON EACH SIDE OF THE FLOOD PLAIN HAS INCREASED.
- ADDITIONAL COLLECTORS HAVE BEEN INCLUDED.
- ORIGINAL SINGLE FAMILY SITE ON NORTH END OF PROPERTY WAS CHANGED TO SCHOOL SITE WITH ATHLETIC & SUPPORT FACILITY.
- BUSINESS PARK WAS CHANGED TO SINGLE FAMILY RESIDENTIAL SITE AND SCHOOL SITE.
- SCHOOL SITE WAS CHANGED TO GREENBELT AND SINGLE FAMILY RESIDENTIAL.
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ACREAGE SUMMARY:  
BULVERDE ROAD = 857.057 ACRES  
JUDSON ROAD = 236.144 ACRES

UNDEVELOPED  
MATRIAN CORP.  
(VOL. 6143, PG. 2078)

QUARRY  
VULCAN MATERIALS COMPANY

UNDEVELOPED  
LILLIE ACKERMAN  
(VOL. 889C, PG. 3408)

UNDEVELOPED  
PHOENIX EIGHTEEN  
(VOL. 4941, PG. 858)

### NORTHERN COLLECTOR GENERAL NOTES:

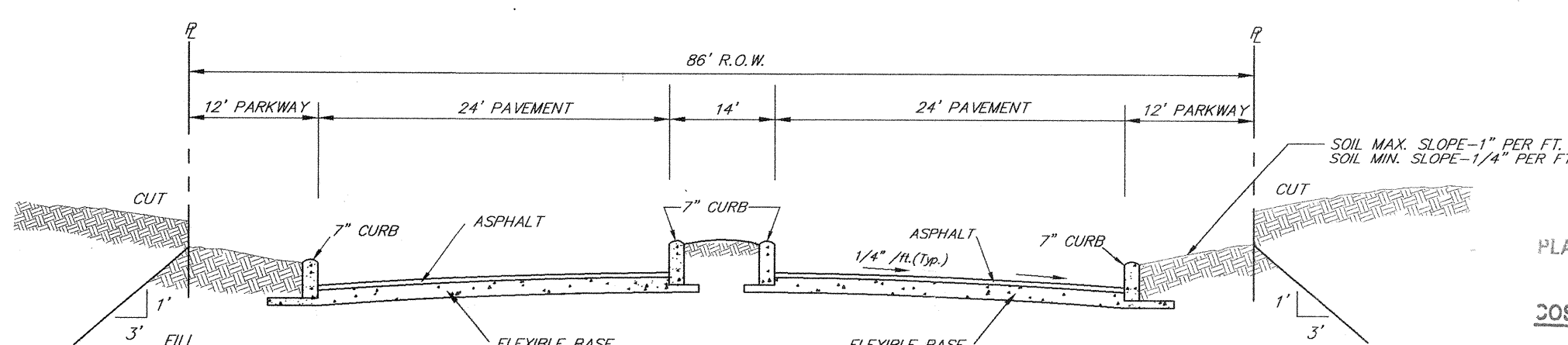
THE 60 FOOT RIGHT OF WAY IDENTIFIED AS THE "NORTHERN COLLECTOR", WILL BE DEDICATED TO THE CITY OF SAN ANTONIO BY THE DEVELOPER FOR USE AS A COLLECTOR ROADWAY TO PROVIDE MITIGATION TO THE TRAFFIC IMPACT CAUSED BY THE PROJECT. THE COLLECTOR WILL CONSIST OF 44 FEET OF PAVEMENT AND 60 FEET OF RIGHT OF WAY.

A) THE WESTERN MOST 1000 FEET OF THE COLLECTOR ROADWAY WILL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF SAN ANTONIO STANDARDS AND WILL BE CONSTRUCTED AT THE TIME OF THE DEVELOPMENT OF THE 80.75-ACRE TRACT. THE 40.75-ACRE TRACT SHALL UTILIZE THIS COLLECTOR ROADWAY AS ITS SOUTHERN POINT OF ACCESS TO BULVERDE ROAD.

B) AS A CONDITION OF THE DEDICATION, IT IS AGREED THAT THE REMAINING SECTIONS OF THE SAID 60 FOOT RIGHT OF WAY (EASTERN 3,200 ± FEET) WILL NOT BE REQUIRED TO BE CONSTRUCTED AS A CONDITION OF PLAT OR PUD PLAN APPROVAL FOR THE TRACTS ABUTTING SAID COLLECTOR (29.46 AC, 80.75 AC, 24.83 AC AND 80.367 AC TRACTS). IF CONSTRUCTED, IT WILL BE CONSTRUCTED BY THE CITY OF SAN ANTONIO OR UPON THE PLATTING OF OTHER DEVELOPMENTS TO THE EAST, WHICH ARE NOT LOCATED WITHIN THIS POADP.

### NOTES:

1. WATER SERVICE TO BE PROVIDED BY SAWS
2. SANITARY SEWER SERVICE TO BE PROVIDED BY SAWS
3. GAS AND ELECTRIC TO BE PROVIDED BY CPS
4. TELEPHONE SERVICE TO BE PROVIDED BY S.W.B. TELE.
5. CA. TV SERVICE TO BE PROVIDED BY TIME/WARNER CABLE.
6. ALL ACREAGES SUBJECT TO CHANGE WITHOUT NOTICE
7. ALL STREETS SHALL BE SECONDARY ARTERIAL UNLESS OTHERWISE SHOWN.



### TYPICAL STREET SECTION

NOT-TO-SCALE  
(FOR PROPOSED GOLD CANYON AND O'CONNOR RD. EXTENSION)

NOTE:  
FOR PAVEMENT DESIGN SECTION  
SEE GEOTECHNICAL ENGINEERING  
REPORT.

DEVELOPER:  
Harold (Tripp) du Perier III  
c/o BITTERBLUE INC.

AGENT: LLOYD A. DENTON, JR.  
11 LYNN BATTS LN., SUITE 100  
SAN ANTONIO, TEXAS 78218  
PHONE: (210) 828-6131  
FAX: (210) 828-6137

PAPE-DAWSON ENGINEERS

555 EAST RAMSEY | SAN ANTONIO, TEXAS 78214 | PHONE: 210.375.9000  
FAX: 210.375.9010

PLAN HAS BEEN ACCEPTED BY

206A

1-31-02

106-A

106-A

On 6-02-03

1st plat filed on

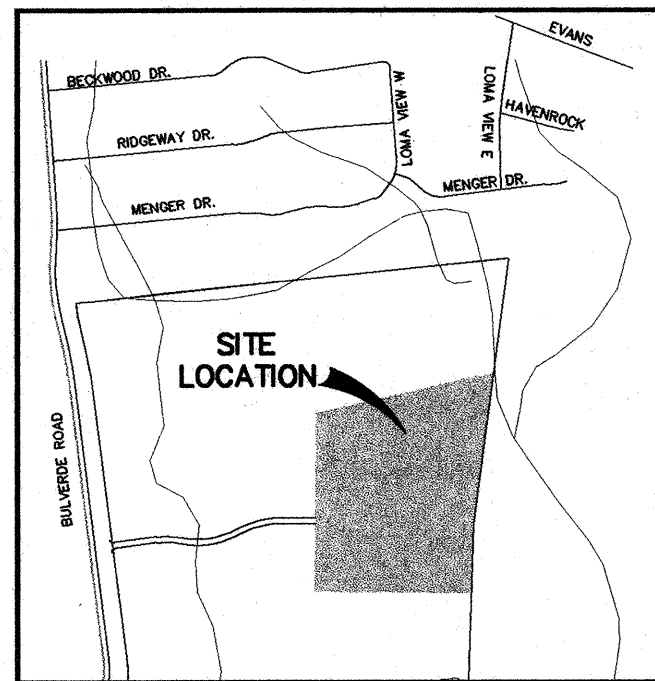
STEUBING ESTATE NORTH

AMENDED P.O.A.D.P.  
PLAN No. 706A

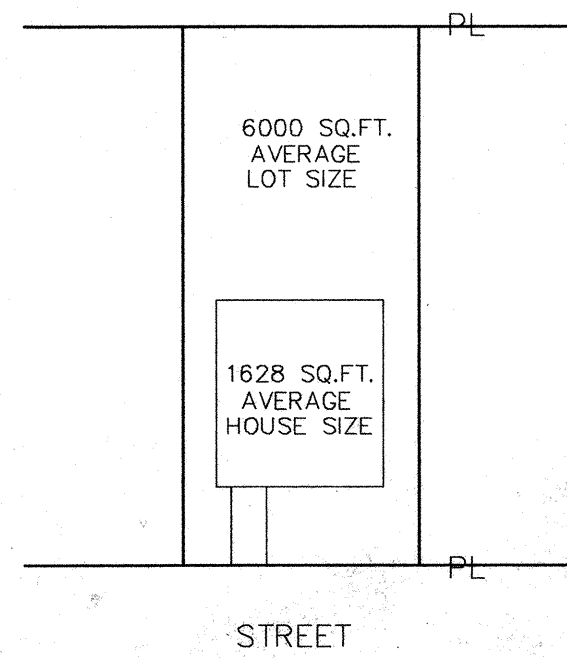
JOB NO. 5136.01 DATE: DEC. 11, 2001

JAN. 30, 2002 (REVISED)

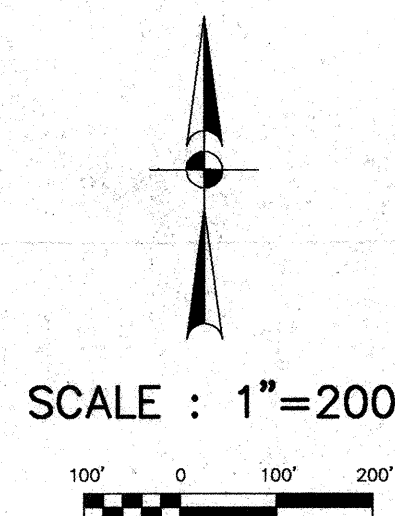




**LOCATION MAP**  
SCALE: 1"=200'



**TYPICAL LOT DETAIL**  
NOT-TO-SCALE

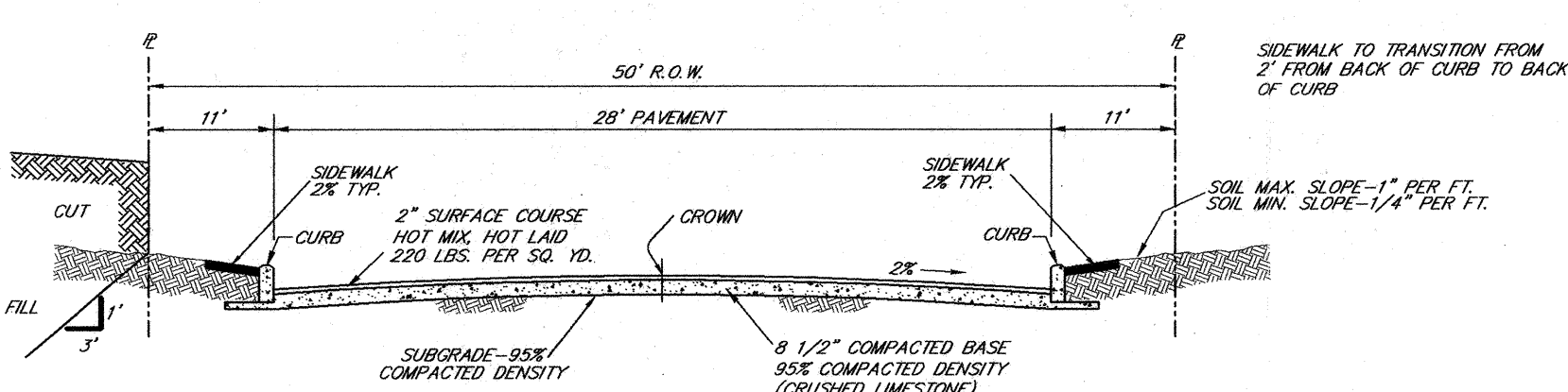
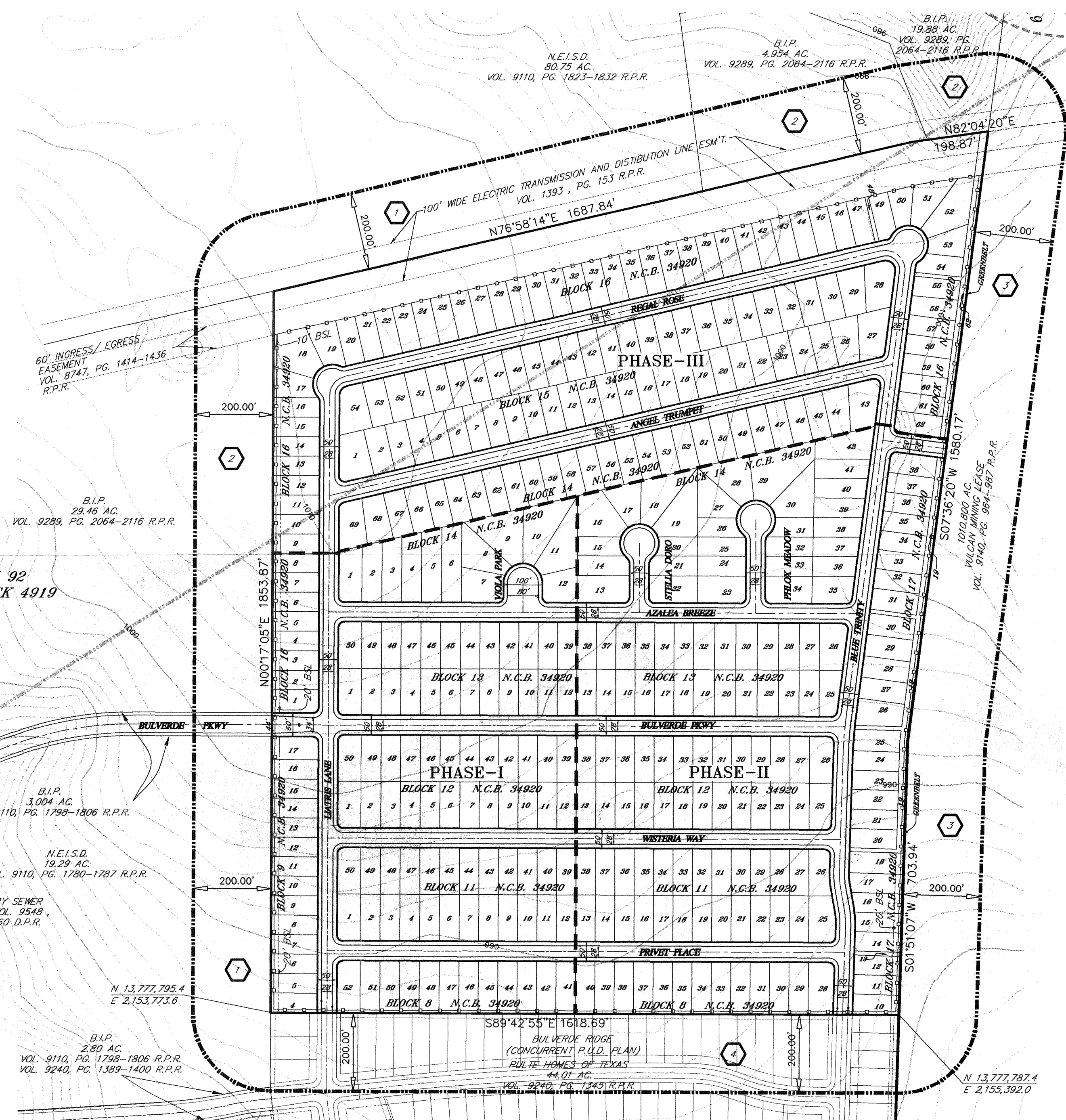


SCALE : 1"=200'

C.E.P.I. & M. CO. SURVEY 397  
ABSTRACT 924, COUNTY BLOCK 4921

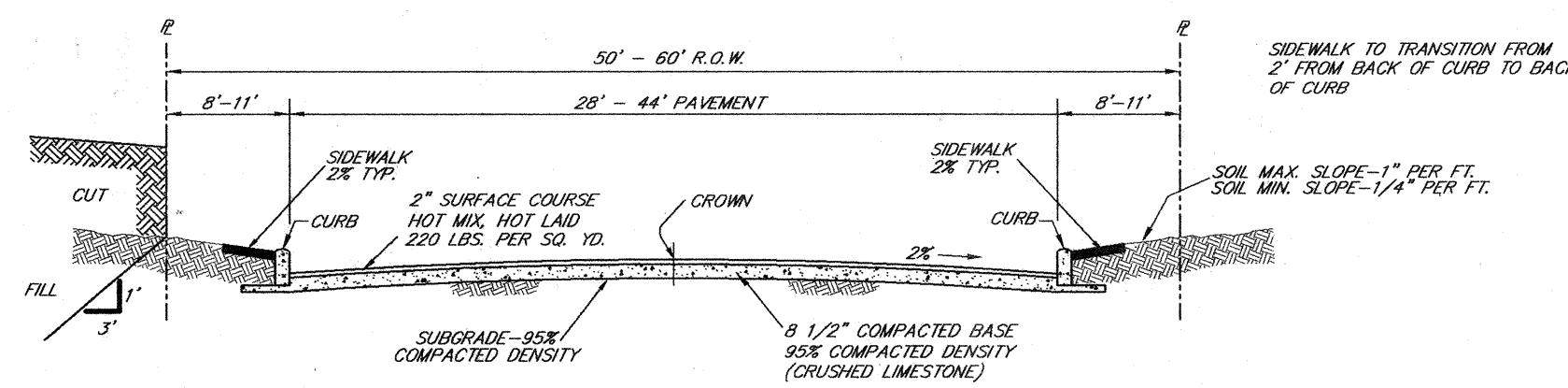
WM. HOTCHKISS SURVEY 92  
ABSTRACT 357, COUNTY BLOCK 4919

JOHN FRIDGE SURVEY 9  
ABSTRACT 235, COUNTY BLOCK 4920



**LOCAL STREET SECTION**  
NOT-TO-SCALE

NOTE:  
FOR PAVEMENT DESIGN  
SEE GEOTECHNICAL  
ENGINEERING REPORT



**COLLECTOR STREET TRANSITION SECTION**  
NOT-TO-SCALE

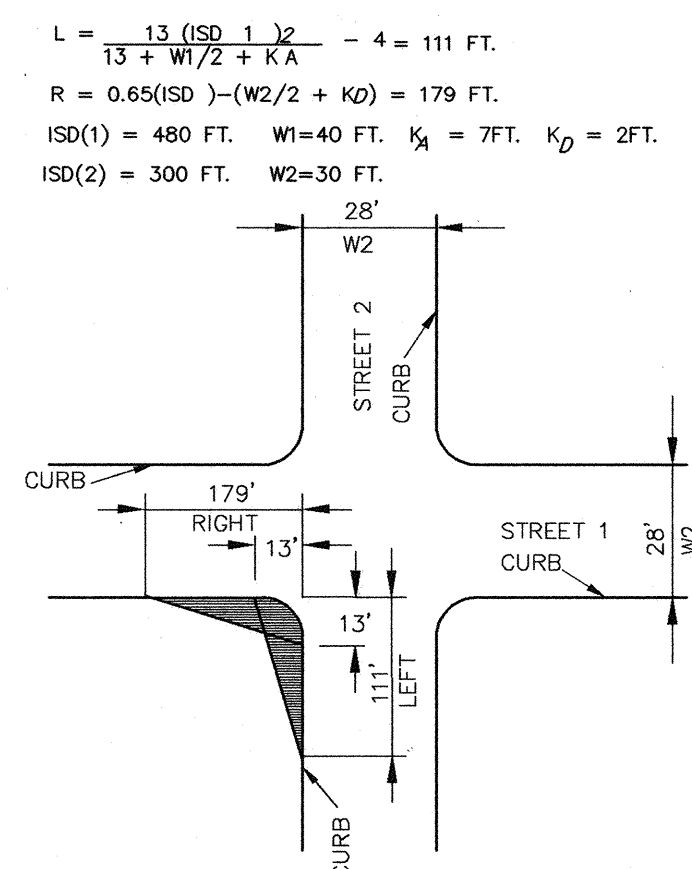
NOTE:  
FOR PAVEMENT DESIGN  
SEE GEOTECHNICAL  
ENGINEERING REPORT

**OWNER/DEVELOPER:**  
CENTEX HOMES  
16414 SAN PEDRO AVE., SUITE 700  
SAN ANTONIO, TEXAS 78232  
PHONE: 210-496-1985 FAX: 210-496-0449

PUD PLAN NO: \_\_\_\_\_  
APPROVED BY THE PLANNING COMMISSION OF THE  
CITY OF SAN ANTONIO, TEXAS.

CHAIRPERSON \_\_\_\_\_ DATE: \_\_\_\_\_  
SECRETARY \_\_\_\_\_ DATE: \_\_\_\_\_

ALL CORNER LOTS WILL COMPLY WITH THE  
CLEAR VISION AREA REQUIREMENTS OF SECTION  
35-3339 OF THE UNIFIED DEVELOPMENT CODE.  
(TWO WAY TRAFFIC)  
CURB LENGTHS: LEFT-EQUATION A  
RIGHT-EQUATION D



**CLEAR VISION AREA CALCULATION**  
NOT-TO-SCALE

**LEGEND:**

- PUD/LIMITS
- 200' R.O.S
- FLOOD PLAIN LIMITS
- LOT OWNERSHIP KEY
- 8' FENCE
- PHASE LIMITS
- BSL = BUILDING SETBACK LINE
- D&P = DEED AND PLAT RECORDS OF BEXAR COUNTY, TEXAS
- O.P.R. = OFFICIAL PUBLIC RECORDS OF REAL PROPERTY OF BEXAR COUNTY, TEXAS
- D.R. = DEED RECORDS OF BEXAR COUNTY, TEXAS

**NOTES:**

1. WATER SERVICE TO BE PROVIDED BY SAWS
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7. ALL STREETS AND GREENBELTS ARE DESIGNATED AS SANITARY SEWER, DRAINAGE, GAS, ELECTRIC, TELEPHONE, WATER, AND CATV. EASEMENTS.
8. ALL CORNER LOTS WILL COMPLY WITH THE CLEAR VISION AREA (UDC SEC. 3533.39)
9. ALL LAND USE IS DETACHED SINGLE FAMILY RESIDENTIAL.
10. ZONING IS P-1, R-5, EARZ
11. SPECIFIC LOT DIMENSIONS WILL BE SHOWN ON PLATS.
12. ALL STREETS ARE PUBLIC.
13. THE BEARINGS ARE BASED ON THE NORTH AMERICAN DATUM OF 1983, FROM STATE PLANE COORDINATES ESTABLISHED FOR THE TEXAS SOUTH CENTRAL ZONE

**DENSITY AND OPEN SPACE RATIOS**

PROPOSED DENSITY	=	5.0 UNITS PER ACRE
TOTAL ACRES	=	80.40 ACRES
TOTAL # LOTS PHASE-I	=	118 (22.36 AC.)
TOTAL # LOTS PHASE-II	=	148 (28.75 AC.)
TOTAL # LOTS PHASE-III	=	134 (29.29 AC.)
TOTAL:	=	399 (80.40 AC.)
AVERAGE HOME SIZE	=	1628 SF

**OPEN SPACE TO RATIO & DENSITY TABLE**

	SQ. FT.	ACREAGE	PERCENTAGE
TOTAL GROSS AREA	3,502,238	80.40	N/A
BUILDING COVERAGE AREA	649,572	14.91	18.5%
OTHER (STREET PAVEMENT, WALKS, DRIVEWAYS)	702,626	16.13	20.1%
OPEN SPACE	2,150,040	49.36	61.4%

POADP NO. 706A APPROVAL DATE: 1-18-02 PUD NO. \_\_\_\_\_ APPROVAL DATE: \_\_\_\_\_

REVISIONS:

**PAPE-DAWSON ENGINEERS**

**ENCLAVE AT BULVERDE CREEK**  
PUD/PEDESTRAIN PLAN

JOB NO. 513668

DATE MAY 8, 2002

DESIGNER JDC

CHECKED RG DRAWN GP

SHEET 1 OF 1

Date: May 02, 2002 5:37pm User: D. Carroll  
File: P:\13136108 Design\Civil\13136108.dwg

# 706A





CITY OF SAN ANTONIO  
DEPARTMENT OF PLANNING  
01 DEC 13 PM 12:41

**City of San Antonio**  
**NEW U.D.C.**  
**Master Development Plan and P.U.D.**  
**APPLICATION**

<b>Date Submitted:</b>	<b>Project ID Number:</b>
------------------------	---------------------------

Project Name: Steubing Estate North

Owner/Agent: Bulverde Road Properties, LTD. (north) c/o Lloyd A. Denton, Jr.

Phone: (210)828-6131 Fax: (210)828-6137

Address: 11 Lynn Batts Lane, Suite 100, San Antonio, TX Zip code: 78218

Engineer/Surveyor: Pape-Dawson Engineers, Inc. Phone: (210)375-9000 Fax: (210)375-9010

Address: 555 East Ramsey, San Antonio, TX Zip code: 78216

Existing legal Description (PUD Only): N/A

Existing zoning: P-1,R-5, B-1 & B-2 Proposed zoning: N/A

(PUD Only) Linear feet of street: N/A

<input type="checkbox"/> Private	<input type="checkbox"/> Gated	<input type="checkbox"/> Attached
<input type="checkbox"/> Public	<input type="checkbox"/> Un-Gated	<input type="checkbox"/> Detached

(PUD Only) Number of lots: N/A divided by acreage: \_\_\_\_\_ = Density: \_\_\_\_\_

(PUD Only) Total open space: N/A divided by total acreage: \_\_\_\_\_ = Open space: \_\_\_\_\_ %

(PUD Only) Type of gate(guard/mag card/key/transmitter/etc.): N/A

(PUD Only) Construction start date: N/A

(PUD Only) X/Y coordinates at major street entrance: X: N/A Y: \_\_\_\_\_

**Site is over/within/includes:**

Edwards Aquifer Recharge Zone: ☒ Yes ☐ No

San Antonio City Limits? ☒ Yes ☐ No

Projected # of Phases: 10

Council District: 10 School District: NEISD Ferguson Map Grid: 484 / C7



**City of San Antonio**  
**NEW U.D.C.**  
**Master Development Plan and P.U.D.**  
**APPLICATION**  
(Continued)

Is there a previous Master Development Plan (a.k.a.POADP) for this Site?

Name Steubing Estate North No. 706

Is there a corresponding PUD for this site? Name N/A No. N/A

Plats associated with this Master Development Plan (a.k.a.POADP) or site?

Name the Psychological Corporation No. 200043

Name \_\_\_\_\_ No. \_\_\_\_\_

Name \_\_\_\_\_ No. \_\_\_\_\_

Contact Person and authorized representative:

Print Name: Jon Adame, P.E. Pape-Dawson Engineers, Inc. Signature: 

Date: 12/13/01 Phone: (210) 375-9000 Fax: (210) 375-9010

**Master Development Plan and P.U.D.**  
**Technical Review**

☒ Name of the Master Development Plan or P.U.D. and the subdivision;

☒ City assigned Plan ID number;

☒ Name and address of owner of record, developer and engineer;

☒ The name names of all adjacent property owners as shown on current tax records;

N/A ☐ Certificate of agency or power of attorney if other than owner;

N/A ☐ Signature blocks for the chairperson and secretary (Planning director or assignee);

N/A ☐ (PUD ONLY) Proposed covenants on the property, if any, including a map and legal description of area affected;

N/A ☐ Two points identified by Texas Planes Coordinates;

N/A ☐ Basis of bearing used and a north point;

N/A ☐ Boundary of the development and total acreage encompassed, thereby described and mapped at and appropriate scale;

☒ (MDP ONLY) topographic contour lines no greater than ten (10) feet;



**City of San Antonio**  
**NEW U.D.C.**  
**Master Development Plan and P.U.D.**  
**Technical Review**  
(Continued)

- N/A ☐ (PUD ONLY) Existing topography with maximum contour intervals of two (2) feet, except where existing ground is on a slope of less than five percent (5%) then either one foot contours or spot elevation shall be provided where necessary;
- ☒ Date of preparation;
- ☒ Graphic and written scale and north arrow;
- ☒ A location map at a scale not less than 1"= 2,000 indicating the location and distance in relation to adjacent streets and all surrounding Major Thoroughfares. The location map is to be located in the top left hand corner of the sheet;
- ☒ Total area of property;
- ☒ All existing easements or right-of-way with street names impacting the development area, their nature and width;
- ☒ The approximate location and widths of all proposed public and private streets major thoroughfares, collectors and local B streets within the developments boundaries;
- N/A ☐ (PUD ONLY) The location of all proposed uses or zoning classification as applicable and the maximum allowable intensity (residential density or non-residential FAR);
- ☒ (MDP ONLY) The location and general nature of proposed uses and proposed intensity (residential density or non-residential FAR)
- N/A ☐ (PUD ONLY) Notation of any restrictions required by the City Council in accordance with this Ordinance;
- ☒ The location and dimension of all proposed adjacent roadways, whether existing or proposed;
- N/A ☐ (PUD ONLY) The location and dimension of all proposed or existing lots.
- ☒ The location, dimensions, and area of all parcels of land proposed to be set aside for park or playground use or other public, or for the use of property owners in the proposed subdivision, where applicable.
- N/A ☐ A development phasing schedule including the sequence for each phase; approximate size in area of each phase; and proposed phasing of construction of public improvements, recreation and common open space areas.
- ☒ The schematic of all existing and proposed streets, as well as proposed access points.
- ☒ The schematic location of the pedestrian circulation system including walkways and bicycle paths where applicable.
- N/A ☐ (Conservation Subdivisions Only) A slope analysis of the proposed development site showing slopes for the following percent of existing grades: 0-10%, 21-30%, 31-40%, and slopes exceeding 40%, including a tabulation of the number of acres in each slope percentage.
- ☒ A delineation of EARZ, wetlands and floodplains. Conservation Subdivision and PUD Plans shall also delineate Woodlands.
- ☒ The location, acreage, category and type of improvements if any for active and passive open space, including greenbelt and active recreation space areas, private recreational areas.



**City of San Antonio**  
**NEW U.D.C.**  
**Master Development Plan and P.U.D.**  
**Technical Review**  
(Continued)

- N/A ☐ (PUD ONLY) Tabulation of the number of acres in the proposed development, showing the total number of lots and area of open space for the site including the following:  
(a) square footage of all buildings and structures  
(b) for non-residential uses, multi-family dwellings, and any portion of a site located within the EARZ, the approximate location and area of impervious cover.
- N/A ☐ A final statement in tabular form which sets forth the following data, when such data is applicable to a given development plan:  
(a) total number of dwelling units, by development phase.  
(b) Residential density and units per acre.  
(c) (PUD Only) Total floor area ratio for each type of use.  
(d) Total area in passive open space.  
(e) Total area in active developed recreational open space.  
(f) Total number of off-street parking and loading spaces.
- ☒ Traffic Impact Analysis (section 35-502).
- N/A ☐ (PUD Only) Utilities plan.
- ☒ (M.D.P. Only) Location of property lines, existing easements, burial grounds, railroad rights-of-way, watercourses; location, width, and names of all existing or platted streets or other public ways within or immediately adjacent to the tract; names of adjacent property owners or subdivision from the latest certified assessment rolls.
- N/A ☐ (PUD Only) Lots numbered as approved by the City.
- N/A ☐ (PUD Only) Layout shall show where lot setbacks as required.
- ☒ Location and size in acres of school sites, as applicable.
- N/A ☐ The exterior boundaries as indicated from deeds or other instruments of the development area giving lengths and bearings of the boundary lines, if the proposed development is bounded by a watercourse, a closing meander traverse of that boundary shall be made and shown on the site plan. Where curving boundaries are used, sufficient data to establish the boundary on the ground shall be given; including the curve's radius, central angle and arc length.
- N/A ☐ A stormwater management plan (section 35-B119)

**I certify that the Master Development Plan / PUD Plan application and accompanying maps are complete and that the conditions listed on this application have been met.**

Certifying Representative:

Print Name: Jon Adame

Signature: 

If you have any questions please call Michael O. Herrera at 207-7900  
APPLICATION REVISED June 4, 2001





# CITY OF SAN ANTONIO

January 31, 2002

Mr. Jon Adame

Pape- Dawson Engineers  
555 East Ramsey  
San Antonio, TX 78216

Re: Steubing Estate North

MDP # 706-A

Dear Mr. Adame:

The City Staff Development Review Committee has reviewed Steubing Estate North Development Plan M.D.P. (formerly POADP) Preliminary Overall Area Development Plan # 706-A. Please find enclosed a signed copy for your files. Your plan was accepted however please note the following:

- In consideration of public safety and convenience, excessive grades by reason of topography should be avoided in street layouts and arrangements.
- Any access and R.O.W. issues along state facilities will need to be resolved with the Texas Department of Transportation (TXDOT). For information about these requirements you can contact TXDOT at 615-5814.
- This development will need to comply with tree preservation ordinance #85262. For information about these requirements you can contact Building Inspections at 207-7102.
- It will be expected that you will plat all of the property depicted in your Master Development Plan (M.D.P.) (formerly POADP), to include floodplains, drainage areas and open space.
- I would encourage you to work closely with the school district, so that they can plan accordingly.
- Development Services Engineering Division has reviewed the Level-3 Traffic Impact Analysis (TIA) for the Amended Steubing Estates, POADP. The analysis is in compliance with the TIA Ordinance 91700. The Level of Service (LOS) at this time is adequate to support existing traffic, however, with the addition of this development along with growth in this area, the LOS deteriorates to a highly congested roadway system.



The off-site impacts that have been identified in the submitted TIA report depend on funding resources of either Tx-Dot or the City of San Antonio and not the developer. Funding is not available at this time and funding is not planned for the completion date of this project by 2010.

The on-site improvements and improvements along the project limits are necessary and shall be provided by the developer and or property owner as per the TIA report, either on or before the completion of the Steubing Estate Development Project in Phase I (2003), Phase II (2005) and Phase III (2010), at no cost to the City of San Antonio:

- Widening and roadway improvements of Bulverde Road adjacent to project limits.
- Construction of left-turn lanes and right turn deceleration lanes at project roadways and or driveways.
- Construction of Gold Canyon Road within project limits.
- Construction of traffic signals at necessary project roadways and driveways.
- Construction of additional left-turn egress capacity at signalized driveways.

The proposed project consists of single family and multi-family residential units. Steubing Estates also incorporates several commercial and business office tracts. The proposed development will be completed in 2010. Steubing Estates will be developed in the three phases. Phase I, Phase II, and Phase III will be completed by 2010 and the projected total will generate 125,532 daily trips. The Yates 800-Acre Development TIA is currently in the review process and is located on the West Side of Bulverde Road across from Steubing Estates. The Yates 800-Acre Development will be completed by 2008 and the projected total will generate 97,643 daily trips. The majority of these daily trips will be distributed on to Bulverde Road, Classen Road, Evans Road, O'Connor Road, Judson Road and Loop 1604.

**Mitigation:**

The 60 Foot Right of Way identified as the "Northern collector", will be dedicated to the City of San Antonio by the developer for use as a collector roadway to provide mitigation to the traffic impact caused by the project. The collector will consist of 44 Feet of Pavement and 60 Feet of Right of Way.

- (A) The western most 1000 Feet of the Collector roadway will be constructed in accordance with the City of San Antonio standards and will be constructed at the time of the development of the 80.75-Acre Tract. The 80.75-Acre Tract shall utilize the collector roadway as its Southern Point of access to Bulverde Road.



Mr. Adame  
Page 3  
January 31, 2002

(B) As a condition of the dedication, it is agreed that the remaining sections of the said 60 Foot Right of Way (Eastern 3, 200± Feet) will not be required to be constructed as a condition of Plat or PUD Plan Approval for the Tracts abutting said collector (29.46 AC, 80.75 AC, 24.834 AC and 80.3697 AC Tracts). If constructed, it will be constructed by the City of San Antonio or upon the Platting of other developments to the East, which are not located within this POADP.

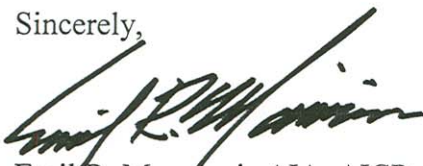
- A pedestrian access will be required at the time of platting across the 53.46 Acre Tract identified as Greenbelt (located east of commercial property, known as Psychological Corporation) to provided connectivity between the Single-Family Residential Tract to the south and north of said 53.46 Acre Tract (Greenbelt) for access to the Elementary School.

Please note that this action by the committee does not establish any commitment for the provision of utilities, services or zoning of any type now or in the future by the City of San Antonio. If the proposed development is not platted in phases this Master Development Plan M.D.P. (formerly POADP) will be invalid.

**All Platting will have to comply with the Unified Development Code, Master Plan and Major Thoroughfare Plan for the city of San Antonio.**

If you have any questions regarding this matter, please contact Mr. Michael O. Herrera, at (210) 207-7873.

Sincerely,



Emil R. Mongivais AIA, AICP  
Director, Planning Department

EM/MH. Jr.

cc: Bob Opitz, P. E., Development Services

Richard De La Cruz, Senior Engineer Development Services



☒ I recommend approval

☐ I do not recommend approval

On \_\_\_\_\_, I notified \_\_\_\_\_, the engineer/  
subdivider/agent, of the corrections needed to remove this objection. Tel # \_\_\_\_\_

Comments: \_\_\_\_\_

PLEASE SHOW ZONING FOR CLARIFICATION.

  
Signature

Planner II  
Title

12-19-01  
Date

Please returned this form to Michael O. Herrera, Planner II by next scheduled meeting

June 28, 2001

*zoning*  
*Steubing Estates North*

CITY OF SAN ANTONIO  
DEPARTMENT OF PLANNING  
01 DEC 19 PM 3:24





City of San Antonio  
Planning Department  
Master Development Plan Section  
**REQUEST FOR REVIEW**

CITY OF SAN ANTONIO  
DEPARTMENT OF PLANNING  
81 DEC 13 PM 12:45  
1-19-01

(Check One)

Date: 12-13-01

- ☒ Master Development Plan (MDP) (Formally POADP) ☐ PUD Plan  
☐ MDP/ P.U.D. Plan (combination) ☐ Mixed Used District (MXD)  
☐ Master Plan Community District (MPCD) ☐ Military Airport Overlay Zone (MOAZ)  
☐ Traditional Neighborhood Development(TND) ☐ Manufactured Home Park Plan (MHPP)  
☐ Plat Certification Request ☐ Pedestrian Plan (PP)

Project Name: Steubing Estates North – amending POADP FILE #706-a

*Major thoroughfare, Neighborhoods, Master Plan, Master Development Plan and Historic Preservation)*

- To: ☐ Master Development Plan ☒ ~~Street and Drainage~~  
☐ Major Thoroughfare ☐ TIA  
☐ Neighborhoods ☐ Zoning  
☐ Historic ☐ Tree Preservation  
☐ SAWS Aquifer ☐ Fire Protection  
☐ Other: \_\_\_\_\_ ☐ Bexar County Public Works

Note: 15 copies (folded) with Request for Review forms (attached) for respective departments or agencies

City of San Antonio Planning Department use

FROM: Michael O. Herrera, Planner II Date : \_\_\_\_\_

**SUBJECT:** The attached item has been submitted for your review, recommendation, and or comment to the Planning Commission or Director. **If necessary, please circulate within your department.** Copy this review sheet as needed. Mark your comments here and be prepared to review at the next schedule meeting. Your written comments are strongly encouraged for documentation in the file.

This item is tentative scheduled for \_\_\_\_\_ before the (MDP) committee

June 28, 2001





On

Comments:

S. L. Assoc.

1/14/02

Please returned this form to Michael O. Herrera, Planner II by next scheduled meeting.

June 28, 2001





City of San Antonio  
Planning Department  
Master Development Plan Section  
**REQUEST FOR REVIEW**

(Check One)

Date: 12-13-01

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Master Development Plan (MDP) (Formally POADP) | <input type="checkbox"/> PUD Plan                             |
| <input type="checkbox"/> MDP/ P.U.D. Plan (combination)                            | <input type="checkbox"/> Mixed Used District (MXD)            |
| <input type="checkbox"/> Master Plan Community District (MPCD)                     | <input type="checkbox"/> Military Airport Overlay Zone (MOAZ) |
| <input type="checkbox"/> Traditional Neighborhood Development(TND)                 | <input type="checkbox"/> Manufactured Home Park Plan (MHPP)   |
| <input type="checkbox"/> Plat Certification Request                                | <input type="checkbox"/> Pedestrian Plan (PP)                 |

Project Name: Steubing Estates North – amending POADP FILE #706-a

*Major thoroughfare, Neighborhoods, Master Plan, Master Development Plan and Historic Preservation)*

- |  |  |
|--|--|
| To: <input type="checkbox"/> Master Development Plan | <input type="checkbox"/> Street and Drainage       |
| <input type="checkbox"/> Major Thoroughfare          | <input type="checkbox"/> TIA                       |
| <input type="checkbox"/> Neighborhoods               | <input checked="" type="checkbox"/> Zoning         |
| <input type="checkbox"/> Historic                    | <input type="checkbox"/> Tree Preservation         |
| <input type="checkbox"/> SAWS Aquifer                | <input type="checkbox"/> Fire Protection           |
| <input type="checkbox"/> Other: _____                | <input type="checkbox"/> Bexar County Public Works |

Note: 15 copies (folded) with Request for Review forms (attached) for respective departments or agencies

**City of San Antonio Planning Department use**

FROM: Michael O. Herrera, Planner II Date : \_\_\_\_\_

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This item is tentative scheduled for \_\_\_\_\_ before the (MDP) committee

June 28, 2001



☒ I recommend approval

☐ I do not recommend approval

On \_\_\_\_\_, I notified \_\_\_\_\_, the engineer/  
subdivider/agent, of the corrections needed to remove this objection. Tel # \_\_\_\_\_

Comments: \_\_\_\_\_

PLEASE SHOW ZONING FOR CLARIFICATION.

  
Signature

Planner II  
Title

12-19-01  
Date

Please returned this form to Michael O. Herrera, Planner II by next scheduled meeting

June 28, 2001

CITY OF SAN ANTONIO  
DEPARTMENT OF PLANNING  
01 DEC 19 PM 3:24





City of San Antonio  
Planning Department  
Master Development Plan Section  
**REQUEST FOR REVIEW**

(Check One)

Date: 12-13-01

DEC 13 PM 2:48

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Master Development Plan (MDP) (Formally POADP) | <input type="checkbox"/> PUD Plan                             |
| <input type="checkbox"/> MDP/ P.U.D. Plan (combination)                            | <input type="checkbox"/> Mixed Used District (MXD)            |
| <input type="checkbox"/> Master Plan Community District (MPCD)                     | <input type="checkbox"/> Military Airport Overlay Zone (MOAZ) |
| <input type="checkbox"/> Traditional Neighborhood Development(TND)                 | <input type="checkbox"/> Manufactured Home Park Plan (MHPP)   |
| <input type="checkbox"/> Plat Certification Request                                | <input type="checkbox"/> Pedestrian Plan (PP)                 |

Project Name: Steubing Estates North – amending POADP FILE #706-a

*Major thoroughfare, Neighborhoods, Master Plan, Master Development Plan and Historic Preservation)*

- |  |  |
|--|--|
| To: <input type="checkbox"/> Master Development Plan   | <input type="checkbox"/> Street and Drainage       |
| <input checked="" type="checkbox"/> Major Thoroughfare | <input type="checkbox"/> TIA                       |
| <input type="checkbox"/> Neighborhoods                 | <input type="checkbox"/> Zoning                    |
| <input type="checkbox"/> Historic                      | <input type="checkbox"/> Tree Preservation         |
| <input type="checkbox"/> SAWS Aquifer                  | <input type="checkbox"/> Fire Protection           |
| <input type="checkbox"/> Other: _____                  | <input type="checkbox"/> Bexar County Public Works |

Note: 15 copies (folded) with Request for Review forms (attached) for respective departments or agencies

**City of San Antonio Planning Department use**

FROM: Michael O. Herrera, Planner II Date : \_\_\_\_\_

**SUBJECT:** The attached item has been submitted for your review, recommendation, and or comment to the Planning Commission or Director. **If necessary, please circulate within your department.** Copy this review sheet as needed. Mark your comments here and be prepared to review at the next schedule meeting. Your written comments are strongly encouraged for documentation in the file.

This item is tentative scheduled for \_\_\_\_\_ before the (MDP) committee

June 28, 2001

121401



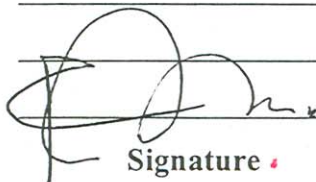
SEE COMMENT  
☒ I recommend approval

☐ I do not recommend approval

On \_\_\_\_\_, I notified \_\_\_\_\_, the engineer/  
subdivider/agent, of the corrections needed to remove this objection. Tel # \_\_\_\_\_

Comments: BULVERDE ROAD IS ON THE MTP REQUIRING A MIN.  
OF 110' ROW. PROPOSED EXTENSION OF COLO CANYON ROAD IS  
ON THE MTP REQUIRING A MIN OF 86' ROW. JUDSON RD IS  
ON THE MTP REQUIRING 86' ROW. LOOP 1604 IS ON THE  
MTP AND TXDOT SYSTEM REQUIRING A MIN. OF 120' ROW AND  
TXDOT REVIEW. PROPOSED EXTENSION OF OCONNOR ROAD, ALTHOUGH IT  
DO NOT APPEAR TO BE WITHIN THE CONFINES OF THIS PROPOSAL, IS ON  
THE MTP REQUIRING A MIN OF 86' ROW.

☒ NEED TXDOT REVIEW

  
Signature

Planner  
Title

121701  
Date

Please returned this form to Michael O. Herrera, Planner II by next scheduled meeting.

June 28, 2001

Major Mor.

Staubing Estates North





City of San Antonio  
Planning Department  
Master Development Plan Section  
**REQUEST FOR REVIEW**

(Check One)

Date: 12-13-01

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Master Development Plan (MDP) (Formally POADP) | <input type="checkbox"/> PUD Plan                             |
| <input type="checkbox"/> MDP/ P.U.D. Plan (combination)                            | <input type="checkbox"/> Mixed Used District (MXD)            |
| <input type="checkbox"/> Master Plan Community District (MPCD)                     | <input type="checkbox"/> Military Airport Overlay Zone (MOAZ) |
| <input type="checkbox"/> Traditional Neighborhood Development(TND)                 | <input type="checkbox"/> Manufactured Home Park Plan (MHPP)   |
| <input type="checkbox"/> Plat Certification Request                                | <input type="checkbox"/> Pedestrian Plan (PP)                 |

Project Name: Steubing Estates North – amending POADP FILE #706-a

*Major thoroughfare, Neighborhoods, Master Plan, Master Development Plan and Historic Preservation)*

- |  |   |
|--|---|
| To: <input type="checkbox"/> Master Development Plan | <input type="checkbox"/> Street and Drainage          |
| <input type="checkbox"/> Major Thoroughfare          | <input type="checkbox"/> TIA                          |
| <input type="checkbox"/> Neighborhoods               | <input type="checkbox"/> Zoning                       |
| <input type="checkbox"/> Historic                    | <input checked="" type="checkbox"/> Tree Preservation |
| <input type="checkbox"/> SAWS Aquifer                | <input type="checkbox"/> Fire Protection              |
| <input type="checkbox"/> Other: _____                | <input type="checkbox"/> Bexar County Public Works    |

Note: 15 copies (folded) with Request for Review forms (attached) for respective departments or agencies

DEPARTMENT OF PLANNING  
01 DEC 13 PM 12:48

**City of San Antonio Planning Department use**

FROM: Michael O. Herrera, Planner II

Date : \_\_\_\_\_

**SUBJECT:** The attached item has been submitted for your review, recommendation, and or comment to the Planning Commission or Director. **If necessary, please circulate within your department.** Copy this review sheet as needed. Mark your comments here and be prepared to review at the next schedule meeting. Your written comments are strongly encouraged for documentation in the file.

This item is tentative scheduled for \_\_\_\_\_ before the (MDP) committee

June 28, 2001



☒ I recommend approval

☐ I do not recommend approval

On \_\_\_\_\_, I notified \_\_\_\_\_, the engineer/  
subdivider/agent, of the corrections needed to remove this objection. Tel # \_\_\_\_\_

Comments: \_\_\_\_\_

*Coordinate tree preservation*  
*Create pedestrian/bike access to conservation*  
*easement*

*D. Reed*

Signature

*City Arborist*

Title

*1/28/02*

Date

Please returned this form to Michael O. Herrera, Planner II by next scheduled meeting.

June 28, 2001

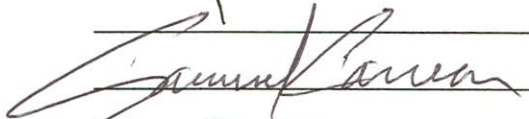


☐ I recommend approval

☐ I do not recommend approval

On \_\_\_\_\_, I notified \_\_\_\_\_, the engineer/  
subdivider/agent, of the corrections needed to remove this objection. Tel # \_\_\_\_\_

Comments: More detailed information is  
required on this proposed  
development. (Stevling Estates North)  
before approval is recommended.  
Both parcels are adjacent and  
upstream of Dams 13A & 13B.  
The HEC-1 runs for the 1997  
Vickerey Report indicate that  
the dams do not contain the  
100 year flood for the ultimate  
condition. Therefore, both  
parcels must provide detention  
such that the elevation above  
the 100 year flood (ULTIMATE) is  
not increased. Storm Water Engineer  
is currently assessing new information  
whereby the Q ULTIMATE will be  
higher.



Signature

STORM WATER ENGR 1-11-02

Title

Date

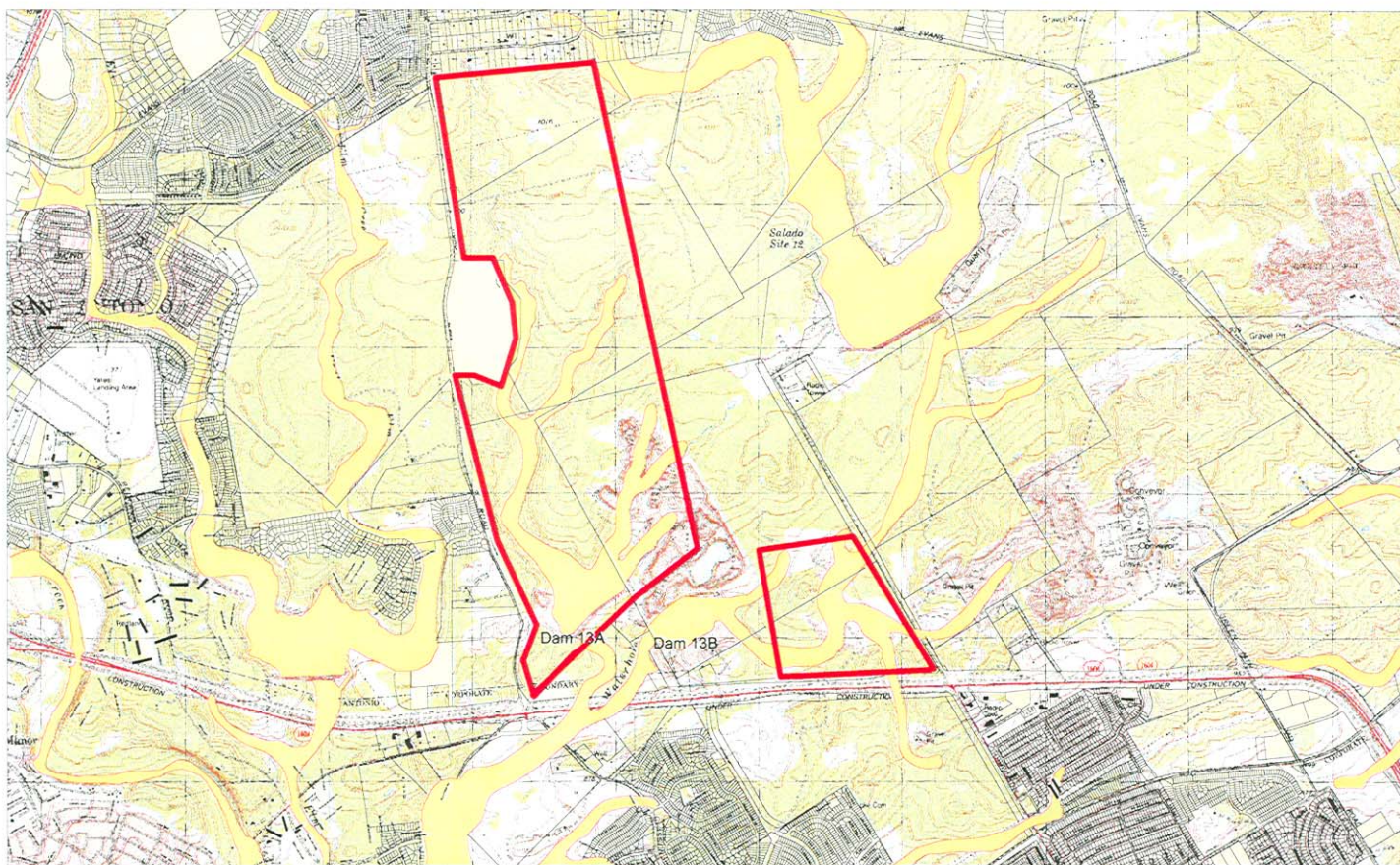
Please returned this form to Michael O. Herrera, Planner II by next scheduled meeting.

June 28, 2001

y/c

02 JAN 11 PM 3:57  
CITY OF SAN ANTONIO  
DEPARTMENT OF PLANNING









City of San Antonio  
Planning Department  
Master Development Plan Section  
**REQUEST FOR REVIEW**

(Check One)

Date: 1-31-02

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Master Development Plan (MDP) (Formally POADP) | <input type="checkbox"/> P.U.D. Plan                          |
| <input type="checkbox"/> MDP/ P.U.D. Plan (combination)                            | <input type="checkbox"/> Mixed Used District (MXD)            |
| <input type="checkbox"/> Master Plan Community District (MPCD)                     | <input type="checkbox"/> Military Airport Overlay Zone (MOAZ) |
| <input type="checkbox"/> Traditional Neighborhood Development (TND)                | <input type="checkbox"/> Manufactured Home Park Plan (MHPP)   |
| <input type="checkbox"/> Plat Certification Request                                | <input type="checkbox"/> Pedestrian Plan (PP)                 |
| <input type="checkbox"/> Major <input type="checkbox"/> Minor                      | <input type="checkbox"/> Other: _____                         |

Project Name: STUBBING ESTATES FILE # 706-A  
NORTH

(Plats Only): 4 copies (folded) with Request for Review forms (attached) (1) Master Development,  
(1) Major thoroughfare, (1) Neighborhoods, (1) Historic Preservation

- |  |  |
|--|--|
| To: <input type="checkbox"/> Master Development Plan | <input type="checkbox"/> Street and Drainage       |
| <input type="checkbox"/> Major Thoroughfare          | <input checked="" type="checkbox"/> TIA            |
| <input type="checkbox"/> Neighborhoods               | <input type="checkbox"/> Zoning                    |
| <input type="checkbox"/> Historic                    | <input type="checkbox"/> Tree Preservation         |
| <input type="checkbox"/> SAWS Aquifer                | <input type="checkbox"/> Parks – Open Space        |
| <input type="checkbox"/> Other: _____                | <input type="checkbox"/> Fire Protection           |
|  | <input type="checkbox"/> Bexar County Public Works |

Note: Master Plan Submittals (ONLY) 15 copies (folded) with Request for Review forms (attached) for respective departments or agencies

**City of San Antonio Planning Department use**

FROM: Michael O. Herrera, Planner II

Date: \_\_\_\_\_

SUBJECT: The attached item has been submitted for your review, recommendation, and or comment to the Planning Commission or Director. **If necessary, please circulate within your department.** Copy this review sheet as needed. Mark your comments here and be prepared to review at the next schedule meeting. Your written comments are strongly encouraged for documentation in the file.

This item is tentative scheduled for \_\_\_\_\_ before the (MDP) committee

August 17, 2001



☒ I recommend approval

☐ I do not recommend approval

On \_\_\_\_\_, I notified \_\_\_\_\_, the engineer/  
subdivider/agent, of the corrections needed to remove this objection. Tel # \_\_\_\_\_

Comments:

Revised ROAD dated Jan 31, 2001  
is approved as provided to this  
division

Signature

Title

Date

Please returned this form to Michael O. Herrera, Planner II by next scheduled meeting.

August 17, 2001

## Traffic Impact Analysis (TIA) Threshold Worksheet

Complete this form as an aid to determine if your project requires a Traffic Impact Analysis, as per City Code, Section 19-69.

Project Name: Steubing Estates North

Location: N.E. Corner of loop 1604 & Bulverde Rd.

Applicant: Bulverde Road Properties LTD, (North), c/o Lloyd A. Denton, Jr.

Address: 11 Lynn Batts Lane, Suite 100, San Antonio, TX. 78218

☒ Owner or ☐ Agent

Phone Number: 828-6131

Permit Type (check one):

☐ Zoning, N.C.B. ☒ POADP # 706A ☐ Plat # ☐ Bldg. Permit # ☐ Other:

### BOX A (Original TIA) RESIDENTIAL DEVELOPMENT

Anticipated Land Use	Number of Units	Peak Hour? (e.g., 5-6 pm, Wkday)	Peak Hour Trip Rate	Peak Hour Trips	Trip Rate Source
					ITE Code: Other:

### BOX B (Original TIA) NON-RESIDENTIAL DEVELOPMENT

Anticipated Land Use	Project Size			Peak Hour? (e.g., 5-6 pm, Wkday)	Peak Hour Trip Rate	Peak Hour Trips	Trip Rate Source
	Acres	GFA	Other*				
							ITE Code: Other:

\*specify:

### BOX C (Updated TIA) If property already has a TIA on file, complete Box C; if not, ignore Box C.

Peak Hour Trips Projected in <i>Current</i> TIA	Peak Hour Trips (from Box A or B) Projected in <i>Updated</i> Development Plan	Increase in Peak Hour Trips (if over 100 additional trips, a new TIA is required)
10,840	9,471	-1,370

### BOX D (Information Regarding the Person/Agency, who prepared the TIA)

Prepared by: Pape-Dawson Engineers, Inc. 555 E. Ramsey, San Antonio, TX 78216 Attn. Rick Gray

Date: 12-12-01

Comments: Original Level 3 TIA submitted in November 2000 was approved on May 8, 2000

### BOX E (For Official Use Only, Do Not Write in this Box)

A traffic impact analysis is required. The consultant preparing the study must meet with City staff to discuss the scope and requirements of the study before beginning the study.  
 A traffic impact analysis is not required. The traffic generated by the proposed development does not exceed the threshold requirements.  
 The traffic impact analysis has been waived for the following reason(s):

Reviewed by:

01 DEC 13 PM 4:13  
CITY OF SAN ANTONIO  
DEPARTMENT OF PLANNING

NOTE: GFA = Gross Floor Area (bldg size)

ITE = Institute of Transportation Engineers, *Trip Generation*, 6th Edition. 525 School Street, S.W., Suite 410, Washington, DC 20024-2729; (202) 554-8050.



Denton Communities  
*Developing a difference.*

Richard  
P.41 - file  
mail

MEMORANDUM

TO: Mr. Bob Optiz  
Mr. Richard De La Cruz

FROM: Laddie Denton

DATE: February 20, 2002

RE: **Bulverde Road North POADP**  
**East-West Collector**

Attached for your information from Pape-Dawson/NEISD delineating the areas swapping around and going in for the public collector. We still have to address the issue of the water main in the public street vis-a-vis more economic service for the NEISD site. The question also came up about flares at the entry point on Bulverde for the public street-like is shown on the driveway. This is an issue only because we need to give them the land now. What's your read on this and/or do you want Pape-Dawson to propose something? Please advise. Thank you.

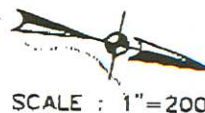
I:AD/meb

P:\Memo\I:AD\WPD\T\A\02-20-02-ALLU.wpd

Attachment

cc: Mr. Emil Moncivais/with attachment





- PAPE-DAWSON ENGINEERS**

TO: EAST RUCKY | SAN ANTONIO TEXAS 78116 | FROM: 270.275.8000  
DATE: 270.275.8010

# 706-A



**BULVERDE ROAD PROPERTIES, LTD.**

11 LYNN BATTS LANE, SUITE 100  
SAN ANTONIO, TEXAS 78218  
210-828-6131

001587

FROST NATIONAL BANK  
San Antonio, Texas 78296

1587

Two Hundred Sixty-Eight and 00/100

PAY TO THE ORDER OF:

CITY OF SAN ANTONIO

DATE 12/13/01 AMOUNT \*\*\*\*\*268.00



AUTHORIZED SIGNATURE

⑈001587⑈ ⑆114000093⑆ 01 7611439⑈

# TRANSMITTAL



To: Cosa-Planning

Date: 1-15-02

Attn: Mike HERRERA

Re: Steubing Estate North  
POADP # 706A

QUANTITY	DESCRIPTION
<u>See</u>	<u>POADP</u>

*If enclosures are not as noted, kindly notify us at once.*

☒ For Approval   ☒ For Your Use   ☐ As Requested   ☐ For Review and Comment

COMMENTS Please call when signed

Thanks for your help with this project.

From: Phil Gray

Project No.: 536.01  
(1.0)

CC: \_\_\_\_\_

**PAPE-DAWSON ENGINEERS, INC.**

555 East Ramsey | San Antonio, Texas 78216 | Phone: 210.375.9000 | Fax: 210.375.9010 | info@pape-dawson.com



# TRANSMITTAL

CITY OF SAN ANTONIO  
DEPARTMENT OF PLANNING



To: COSA-Planning

01 DEC 13 PM 12:41

Date: 12-13-01

Attn: Mike HERRERA

Re: Steubing Estates North

QUANTITY	DESCRIPTION
1	ROADP Amendment Package
	Application w/fee \$268, # 001587
	Digital information
	Reduction
	15 copies w/ Review form
	TIA (copy)
	Zoning exhibit & layout w/Photo overlay

If enclosures are not as noted, kindly notify us at once.

☐ For Approval ☒ For Your Use ☐ As Requested ☒ For Review and Comment

COMMENTS Mike, please call me if you have any  
questions or concerns. Thanks for your help

From:

Rick Gray

Project No.:

5136.01

CC:

PAPE-DAWSON ENGINEERS, INC.

555 East Ramsey

San Antonio, Texas 78216

Phone: 210.375.9000

Fax: 210.375.9010

info@pape-dawson.com

# STUEBING ESTATES NORTH - TRIP GENERATION COMPARISON TABLE

Original Peak TIA Volumes						Revised Peak TIA Volumes					
Tract #	Previous Land Use	Detailed Land Use	Previous Acreage	PM trip generation rates	PM Vehicle Trips	Revised Land Use	Detailed Land Use	Revised Acreage	PM trip generation rates	Revised PM Vehicle trips	Net change
1	Commercial	Mixed Use Retail	25.6		1,334	Commercial	Mixed Use Retail	28		1,459	125
3	Residential	Single Family Detached	92.8	1.01	375	Institutional	School, Stadium & Bus Barn	80.75	0.3	245	-30
						Residential	Single Family Detached	24.83	1.01	100	
5	Commercial	General Office	39.7	1.49	645	Commercial	General Office	48.86	1.49	794	
7	Commercial	Business Park	177.3	1.29	2,491	Residential	Single Family Detached	29.46	1.01	119	-1,721
						Institutional	School	19.29	0.3	44	
10	Institutional	School & Stadium	111.1	0.3	255	Residential	Single Family Detached	124.41	1.01	503	
10.5		Bus Barn		0.2	60	Greenbelt		53.46			
						Residential	Single Family Detached	103.6	1.01	419	
				sub-total tract # 7, 10, 10.5	2,806				sub-total tract # 7, 10, 10.5	1,085	
11	Commercial	Mixed Use Retail	27		709	Commercial	Mixed Use Retail	28.95		760	51
12	Commercial	General Office	15.6	1.49	253	Commercial	General Office	26.4	1.49	428	175
13	Commercial	General Office	30.8	1.49	500	Commercial	General Office	26.74	1.49	434	-66
14	Residential	Multifamily	58.5	0.62	798	Residential	Multifamily	70.03	0.62	955	157
15	Commercial	General Office	26.2	1.49	425	Commercial	General Office	22.67	1.49	368	-57
16	Commercial	General Office	27	1.49	438	Commercial	General Office	26.54	1.49	431	-7
17	Residential	Multifamily	27.7	0.62	378	Residential	Multifamily	39.21	0.62	535	157
18	Residential	Multifamily	18.5	0.62	252	Residential	Multifamily	11.61	0.62	158	-94
19	Commercial	Mixed Use Retail	33.56		1,370	Commercial	Mixed Use Retail	29.02		1,185	-185
20	Commercial	Mixed Use Retail	13.44		558	Commercial	Mixed Use Retail	12.86		534	-24
	Daily Totals				10,841					9,471	-1,370



# ST EUBANK ESTATES

## RECOMMENDATIONS

This analysis was conducted to assess the transportation impacts of the proposed development on the area roadway network and to provide recommendations for roadway improvements necessary to mitigate any adverse traffic conditions that may develop on the adjacent street network. Based on the analysis of the traffic impacts determined by comparing projected traffic conditions without the proposed development with the projected traffic conditions with the additional traffic generated by the proposed development, the following recommendations are presented.

The site plans for the sixteen tracts of developable land within the Steubing Estates North should incorporate many of the following recommendations to facilitate the movement of traffic to and from the site and further reduce the impact of site traffic on the adjacent street network. The following is a summary of recommended mitigation measures associated with the project.

- Construct right-turn deceleration lanes at each project driveway. Deceleration lanes should be 405 feet in length, inclusive of a 230 feet straight line taper along Bulverde Road. Right-turn deceleration lanes along the N. Loop 1604 frontage road should be 350 feet in length, inclusive of a 210 feet straight line taper.
- Construct minor project driveways a minimum of 40 feet wide with adequate on-site storage, and minimum curb return radii of 25 feet. Major project driveways should be constructed with a minimum of 50 feet of pavement width to accommodate double westbound left-turn lanes when Bulverde Road is widened. The possibility of dedicating these major collector roadways as public streets should be considered.
- Provide clear sight distance at each driveway along Bulverde Road (50 mph) to provide a minimum of 820 feet of obstruction free view distance of approaching traffic. Along the N. Loop 1604 frontage road provide clear sight distance at each driveway of 700 feet. All signage and improvements should be selected and located so as to not block these clear sight distances.
- Incorporate signalization, signing and pavement marking improvements that conform to the *Texas Manual on Uniform Traffic Control Devices* for consistent, uniform traffic control.
- Provide appropriate signage directing delivery trucks to designated truck delivery driveways to minimize conflicts with automobile traffic.
- Consult with the Texas Department of Transportation on the construction of turnaround lanes at Bulverde Road, O'Connor Road, and Judson Road. The greatest immediate need is for turnaround lanes at Bulverde Road.
- Consult with City of San Antonio staff regarding the schedule for the Bulverde Road realignment south of Loop 1604.
- Consult with City of San Antonio and Bexar County staff regarding the schedule for the widening of Bulverde Road north of Loop 1604.
- Consult with City of San Antonio staff and Bexar County staff regarding the acceleration of the widening of Bulverde Road.



- Consult with Bexar County staff regarding the schedule of the Bulverde at Evans Road intersection improvements. If possible, improvements should incorporate dual northbound and dual westbound left-turn lanes and a northbound right-turn lane.
- Consult with the Texas Department of Transportation and City of San Antonio regarding the schedule for the construction of traffic signals at Bulverde Road and Loop 1604/Classen Road.
- Consult with the Texas Department of Transportation and City of San Antonio staff regarding capacity improvements at Bulverde Road and Loop 1604. This interchange should include dual left-turns for northbound, southbound, eastbound, and westbound.
- Consult with the City of San Antonio Planning Department regarding the lack of east-west major thoroughfares within the project area. Planning of major arterials normally requires that major arterials be spaced at approximately one-mile intervals. The City of San Antonio's Major Thoroughfare Plan currently illustrates only Evans Road as a continuous east-west primary arterial north of N. Loop 1604. Evans Road is approximately three miles north of N. Loop 1604. Ideally, this area would be served with two east-west primary arterials located between Evans Road and N. Loop 1604.
- To the maximum extent practical, development of the individual tracts should incorporate an overall access strategy that will allow major, signalized access along Bulverde Road. These signalized locations should be planned to occur at approximately ½ mile intervals and not less than ¼ mile intervals. Also, these future signalized access locations should be selected to fit in with future major thoroughfares, such as Gold Canyon Road. Good ¼ and ½ mile spacings of traffic signals will provide good two-way progressive coordination along Bulverde Road. Uneven spacings of traffic signals will decrease the ability to provide good two-way progression. This would degrade traffic flow along Bulverde Road.
- The use of flexible work schedules, or staggered work shifts, should be encouraged within the development to spread the peak traffic demand over a longer period of time; thereby, lessening the peak travel demand.
- Consideration for a reduction in the proposed land-use density, or a lengthening of the development schedule should be considered to provide time for the development of other regional infrastructure improvements.
- Reversing the proposed phasing of the development such that phases are completed in the order of 3-2-1 would result in a more efficient phasing of any development infrastructure improvements.
- Final alignment of Gold Canyon Road must be determined before any portion of Gold Canyon Road is constructed within the development. Alignment of Gold Canyon Road at the intersection with Bulverde Road will be critical to the efficiency of operation for the future traffic signal at this location.
- Construction of Gold Canyon Road between Bulverde Road and Sonterra Boulevard is critical for access to the proposed development.



## **MITIGATION SUMMARY**

This section summarizes the improvements that are needed to mitigate existing conditions and project conditions at the completion of each project phase. The mitigation measures should be completed prior to the completion of the project specific phase.

### **Existing Conditions**

Traffic signals are needed at the interchange of Bulverde Road and North Loop 1604. Installation of these traffic signals are warranted under existing conditions, as illustrated in the warrant study provided in **Appendix E**. The existing intersection of Bulverde Road at Classen Road must be temporarily signalized to operate in coordination with the diamond interchange.

The interchange of O'Connor Road at North Loop 1604 currently operates at LOS F during the pm peak; however, the existing volumes do not satisfy the criteria used by the Texas Department of Transportation for the installation of traffic signals.

### **Year 2003 (Phase 1)**

By the completion of Phase 1 in 2003 the intersection of Bulverde Road at Evans Road will require the installation of traffic signals based on non-site traffic. Furthermore, intersection should be designed to provide a minimum of dual left-turn lanes northbound and eastbound plus exclusive right-turn lanes eastbound and northbound.

Interchange at Bulverde Road and North Loop 1604 will require that the interchange be designed to maximize interchange capacity. A minimum of dual left-turn lanes should be provided on the eastbound, westbound, northbound, and southbound approaches. Furthermore exclusive right-turn lanes should be provided on all intersection approaches. Consideration for dual right-turn lanes should be considered for westbound and southbound. Turnaround lanes should be provided for eastbound and westbound. The intersection at Classen Road should be eliminated with the construction of Bulverde Road along a new alignment south of North Loop 1604.

Bulverde Road should be widened to four-lanes with exclusive left-turn lanes and right-turn lanes at each intersecting roadway and project driveway. Turn lanes should also be required at The Psychological Corporation driveways.

Proposed driveways for Phase 1 are illustrated in Figure 22. The following driveway/collector roadways should be designed to maximize intersection capacity, including dual westbound left-turn lanes, left-turn lane southbound, right-turn lane westbound, and right-turn lane northbound for Driveways 3, 4, 6 and 7. Final placement of these driveways should be spaced to provide either ¼ mile or ½ mile spacing between these planned signalized locations.

#### **Year 2005 (Phase 2)**

Project driveways for Phase 2 are illustrated in Figure 23. The construction of a continuous Gold Canyon Road from US 281 to within the project site should be completed by the completion of Phase 2. A minimum of four-lane divided cross-section should be considered. At the intersection of Bulverde Road and Gold Canyon Road, labeled Driveway 9 on the project site, intersection capacity should be maximized with the construction of dual left-turn lanes and exclusive right-turn lanes. The installation of a traffic signal at this intersection should be planned.

Additional signalized access locations should be considered and planned for Driveway 11 (Emerald Ridge) and 13 at approximately 1/4 mile spacing. Driveway 13 should be located at approximately ¼ mile north of the intersection of the north frontage road of North Loop 1604.

The construction of two-lane entrance and exit ramps for both travel directions should be considered at Bulverde Road.

#### **Year 2010 (Phase 3)**

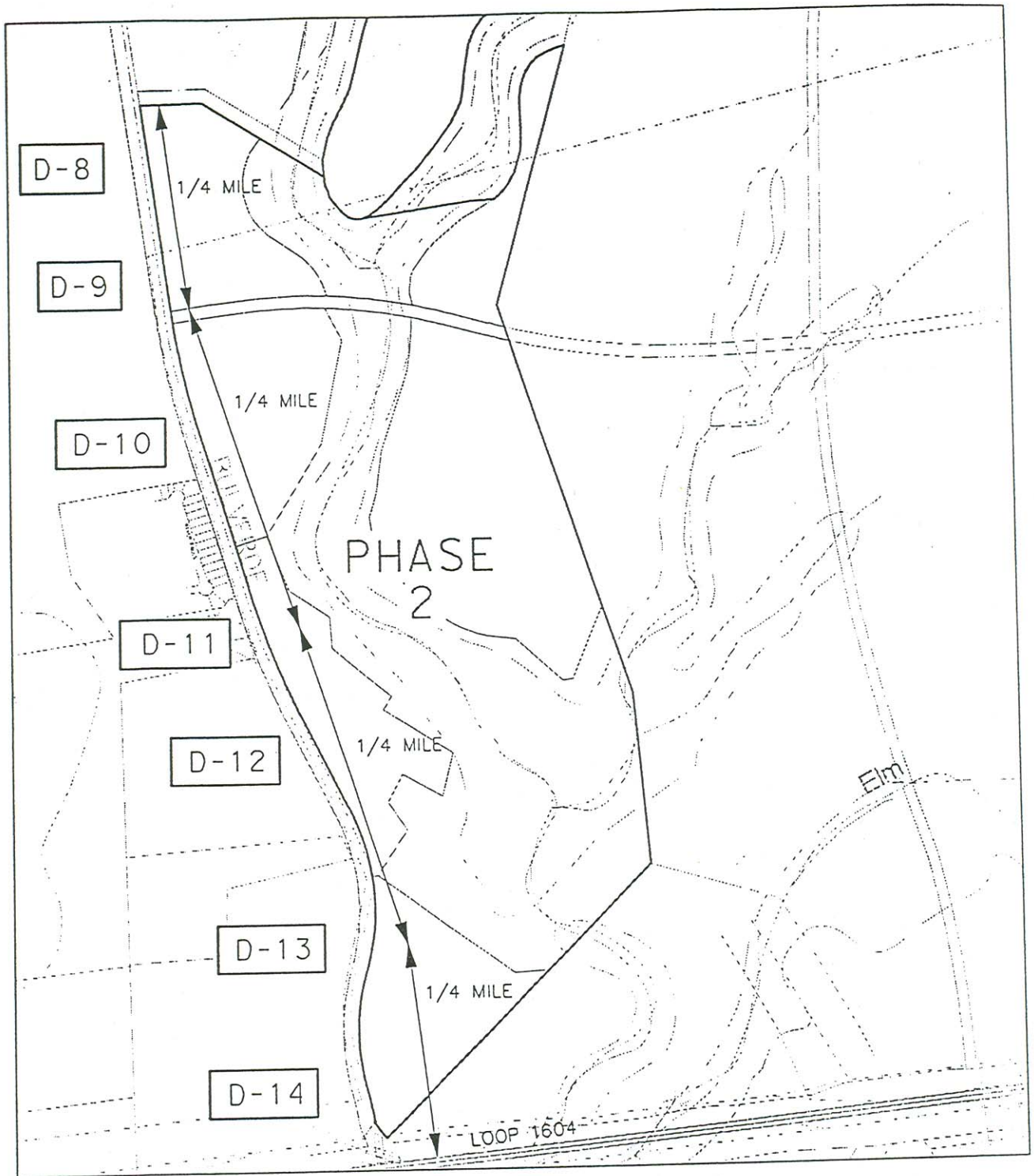
Traffic signals will be required by 2010 at the interchanges of O'Connor Road and Judson Road. Under these signalized conditions, no additional mitigation will be necessary. Proposed project driveways are illustrated in Figure 24. Left-turn lanes should be constructed at Driveway 20, 21, 22 and 23 along Judson Road to provide access for Tracts 18 and 20. Right-turn lanes should be provided along the westbound frontage road of North Loop 1604 for access to tracts 17, 19, and 20. Since Tract 17 does not have direct access to the frontage road a major shared access point should be located to serve Tract 17 and 19.





FIGURE 22  
PHASE I  
DRIVEWAY LOCATIONS





LEGEND

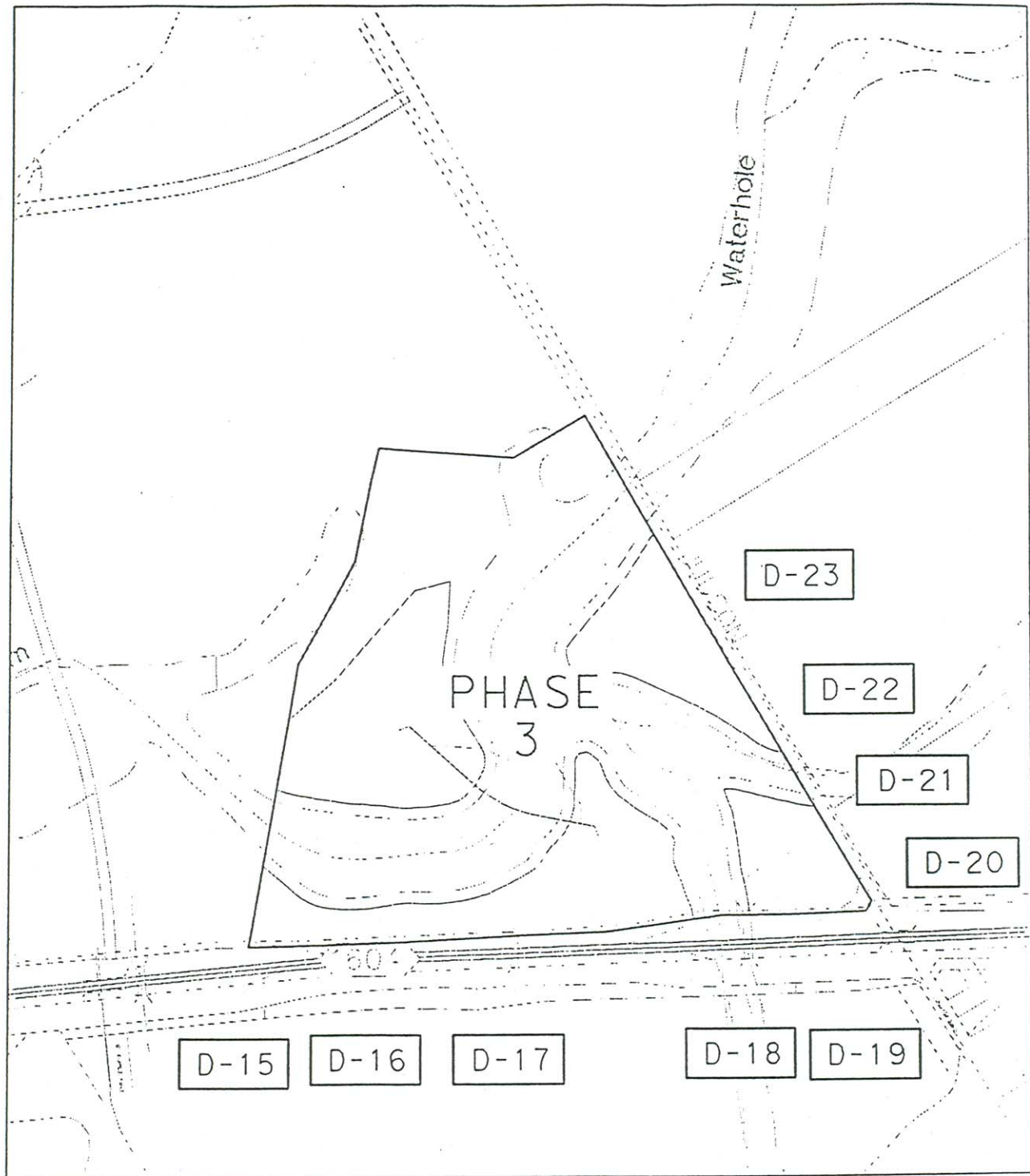
FIGURE 23  
PHASE 2  
DRIVEWAY LOCATIONS



PAPE-DAWSON **pd** ENGINEERS  
CIVIL & ENVIRONMENTAL

555 EAST RAWSEY | SAN ANTONIO TEXAS 78216 | PH: (210) 375-9000  
FX: (210) 375-9010





LEGEND

FIGURE 24  
PHASE 3  
DRIVEWAY LOCATIONS



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FX: (210) 375-9010

## **Development Mitigation Summary**

The following items do not require participation by the project developer. Any participation in the following improvements are voluntary.

- Construction of Traffic Signals at Bulverde Road and North Loop 1604
- Construction of Traffic Signals at O'Connor Road and North Loop 1604
- Construction of Traffic Signals at Judson Road and North Loop 1604
- Construction of Traffic Signals at Bulverde Road and Evans Road
- Construction of Capacity Improvements at Bulverde Road and Evans Road
- Construction of Capacity Improvements at Bulverde Road and North Loop 1604
- Construction of Bulverde Road on new alignment, south of North Loop 1604
- Construction of Gold Canyon Road from Bulverde Road to US 281(Sonterra Blvd.)
- Widening of Bulverde Road at Emerald Ridge
- Widening of Bulverde Road outside of development limits.
- Increasing On-ramp capacity at Bulverde Road and North Loop 1604
- Increasing Off-ramp capacity at Bulverde Road and North Loop 1604

The following items are likely to require some form of participation by the project developer.

- Widening of Bulverde Road within project limits
- Construction of left-turn and right turn lanes at project driveways
- Construction of Gold Canyon Road within project limits
- Construction of traffic signals at necessary project driveways
- Construction of additional left-turn egress capacity at signalized driveways



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# **TRANSPORTATION PLANNING HANDBOOK**



**INSTITUTE OF  
TRANSPORTATION ENGINEERS**

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# TRANSPORTATION PLANNING HANDBOOK

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John D. Edwards, Jr., P.E.  
*Editor*

Institute of Transportation Engineers



PRENTICE HALL, *Englewood Cliffs, New Jersey 07632*



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CIP

Manufacturing buyers: Linda Behrens/Dave Dickey

NOTE: The Urban Mass Transit Administration (UMTA) recently changed its name to Federal Transit Administration (FTA).



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networks in most cases represent the focusing of transportation links on a central location, normally the core of the city. Radial networks have usually evolved over long periods of time with the radial link representing the most direct path between the central city and outlying cities or towns. The links were most likely established prior to motorized vehicles but have since evolved into highway facilities oftentimes paralleled by fixed rail corridors.

Radial networks provide efficient movements on major facilities where there is a strong orientation to the core area. Traffic characteristics of radials often show large directional distribution imbalances which result in higher volumes as one nears the core. This often creates the need for more lanes near the core and a greater concentration of traffic within the core. Radial networks do result in odd-sized and -shaped blocks and angled intersections. If radial arterials are superimposed on a local grid system, this can create six-legged intersections. This type of superimposition can result in less efficient network operations. Radial patterns are often found in older cities that are adjacent to a body of water. The radials may have previously led to the harbor area. Examples of cities with radial networks include Boston and Chicago.

#### 2.2.3.3 Circumferential

Circumferential networks are a relatively new network form and are largely post-World War II. In general circumferentials have been added to existing networks to provide the means to bypass all or a part of the urban area. Most circumferentials originated as part of the urban interstate system and represent beltways or bypasses of urban areas. Many circumferential routes are freeways and provide access only at interchanges. Some of the urban interstate systems provided several rings around the core area, such as in Indianapolis and Cincinnati. In a number of cities the "close-in" circumferentials were deleted from the system due to neighborhood disruptions. This occurred in Boston and Washington, D.C., among others. However both Washington and Boston do have circumferential interstate routes, and Boston has both an outer and a far outer circumferential.

Initially the primary purpose of circumferentials was that of a bypass for long-distance traffic. However because of the accessibility they created in areas with low land prices, they have become major carriers of local traffic for the many suburban activity centers that now concentrate along their interchanges. Suburban activity centers are discussed in Section 2.4.5.

#### 2.2.3.4 Eclectic

Eclectic networks represent combinations of other network forms. To some extent most urban areas exhibit eclectic networks over their whole, often because of the manner in which several smaller jurisdictions have grown together to form a metropolitan area. As urban areas grow together, previously isolated networks need to be joined together, and even when they are both the same type, their orientation may be totally different resulting in awkward connections. Eclectic networks may also be a sign of piecemeal highway planning efforts. Such networks are often inefficient in total and may present difficult operational problems. They may

also foster isolated pockets of congestion which can be expensive and disruptive to solve.

#### 2.2.3.5 Spacing

The spacing of network elements is dependent upon the density of development they serve. However, general guidelines for grid networks can be used with the number of lanes changed to fit demand patterns.

**Residential streets.** Spacing of residential streets is generally a land use decision related to lot size and layout of the development.

**Collectors.** Collectors should be provided at approximately half-mile spacings.

**Arterials.** Arterials should be located at approximately 1-mile spacings. This would ensure that a resident does not have to travel more than a half mile to reach an arterial. It also can limit signal spacings to one half-mile intervals, which provides more flexibility for signal timing.

**Freeways.** Freeways should be located at 4- to 6-mile spacings. Freeway interchanges should be no closer than 1 mile apart and preferably farther. Interchanges at 2-mile spacings would imply that every other arterial interchanged with the freeway. This would also indicate that arterials could be subdivided into major and minor arterials. If the arterial network is comprehensive, 2-mile spacing of interchanges would not create any significant excess travel.

Freeways or limited access divided highways make up the backbone of the highway system in our larger metropolitan areas. Table 2.18 provides data on the extent of limited access highways in the 20 most populous metropolitan areas. In most cases limited-access highways are most dense per square mile in the largest populated areas while simultaneously are the least dense per million inhabitants in the same areas.

Figure 2.1 is a schematic diagram of a basic grid system of streets and highways with typical spacings. It presents a hierarchy of the street classifications found in an urban highway system.

### 2.2.4 Emerging trends

The decade of the 1980s saw vast growth in America's suburbs, not only in terms of residential development but also in terms of mixed-use development dominated by employment-based activity centers. The rapid improvements in telecommunications allowed companies greater flexibility in location. No longer were they tied to downtown locations with their easy access to finance and government. By moving into lower-density suburban settings, they could still communicate with related business and government while enjoying the many amenities the suburbs could offer. Those businesses also found that those with whom they needed to interact were also joining them in the suburbs. These changes in employment trends during the 1980s are illustrated in Table 2.19, which provides data for four large urban areas, namely, Philadelphia, Baltimore, Washington, D.C., and New York City. In these areas—typical of other American cities—employment



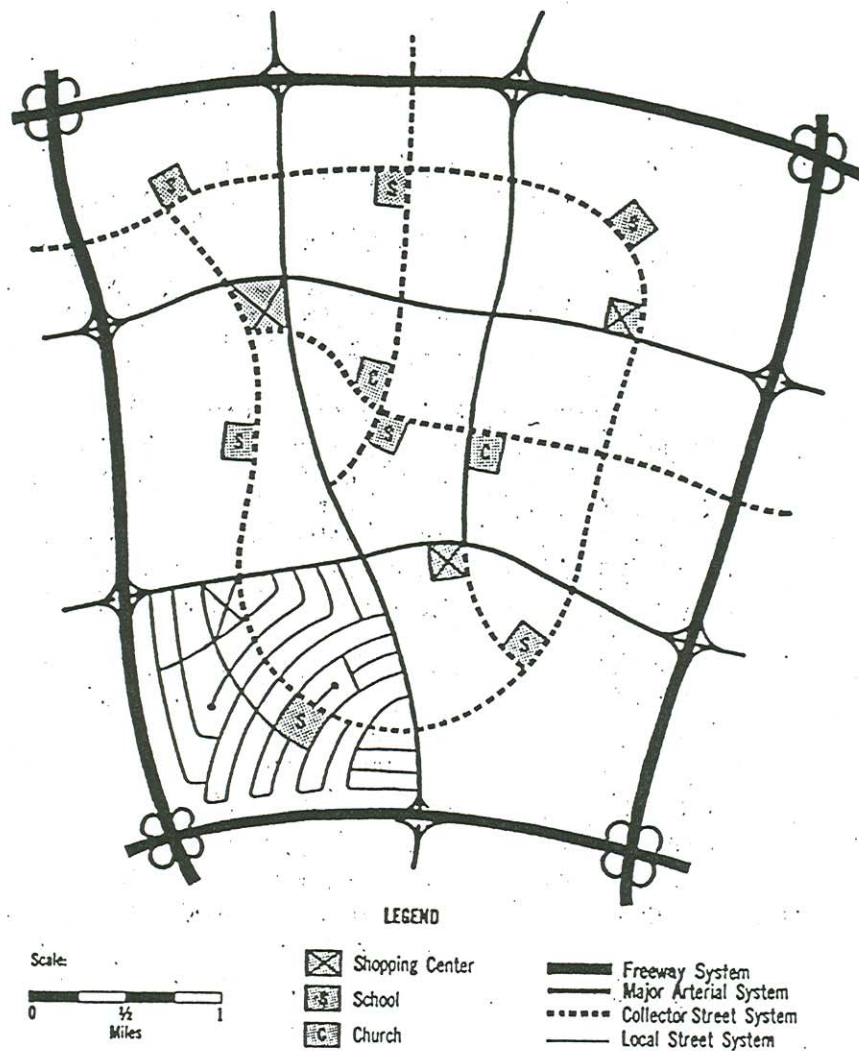


Fig. 12-2—Diagrammatic Layout for a Residential Area



**Table 7**  
**Site Traffic for Proposed Development**

Project Phase and Land Use (Code)	Size	AM Peak Hour		PM Peak Hour		Daily Totals
		Enter	Exit	Enter	Exit	
Phase 1- 2003						
Tract 1 Retail (8xx)	278.8 GFA	583	419	1,071	1,041	23,118
Tract 3 Single Family Res (210)	371 DU	70	209	240	135	3,552
Tract 5 General Office (710)	432.3 GFA	594	81	110	535	4,760
Tract 7 Business Park (770)	1,930.8 GFA	2,347	442	573	1,918	24,637
Tract 10 Elem School (520)	850 stud.	145	101	148	107	867
Bus Facility (NA)	300 bus	16	299	45	15	1,185
Total Phase 1		3,420	1,318	1,746	3,412	43,757
Phase 2 – 2005						
Tract 11 Retail (8xx)	294.0 GFA	416	305	533	554	12,123
Tract 12 General Office (710)	169.9 GFA	233	32	43	210	1,870
Tract 13 General Office (710)	335.4 GFA	460	63	85	415	3,693
Tract 14 Multifamily Res (220)	1,287 DU	105	551	535	263	8,533
Tract 15 General Office (710)	285.3 GFA	392	53	72	353	3,141
Tract 16 General Office (710)	285.3 GFA	404	55	74	364	3,237
Total Phase 2		1,929	1,004	1,233	1,890	32,598
Phase 3 – 2010						
Tract 17 Multifamily Res (220)	609 DU	50	261	253	125	4,040
Tract 18 Multifamily Res (220)	407 DU	33	174	169	83	2,698
Tract 19 Retail (8xx)	365.5 GFA	665	454	954	920	22,293
Tract 20 Retail (8xx)	146.4 GFA	241	185	453	462	10,146
Total Phase 3		707	867	1,396	1,162	39,177
Project Total 2010		6,056	3,188	4,376	6,464	125,532

### Pass-By Trips

Pass-by trips are defined as immediate stops on the way from an origin to a primary trip destination. Factoring for pass-by trips does not affect the driveway volumes for the development but does affect the amount of traffic added to the adjacent street system. The trip generation rates in Trip Generation are derived from actual measurements of traffic generated by individual sites. These rates represent vehicles entering and exiting a specific site. Many developments, including shopping centers, discount stores, restaurants, banks, service stations, and convenience markets often locate adjacent to busy streets to attract motorists on the street.

Pass-by reductions were factored into the traffic generated by the four retail parcels using the factors listed in Table 8, below.

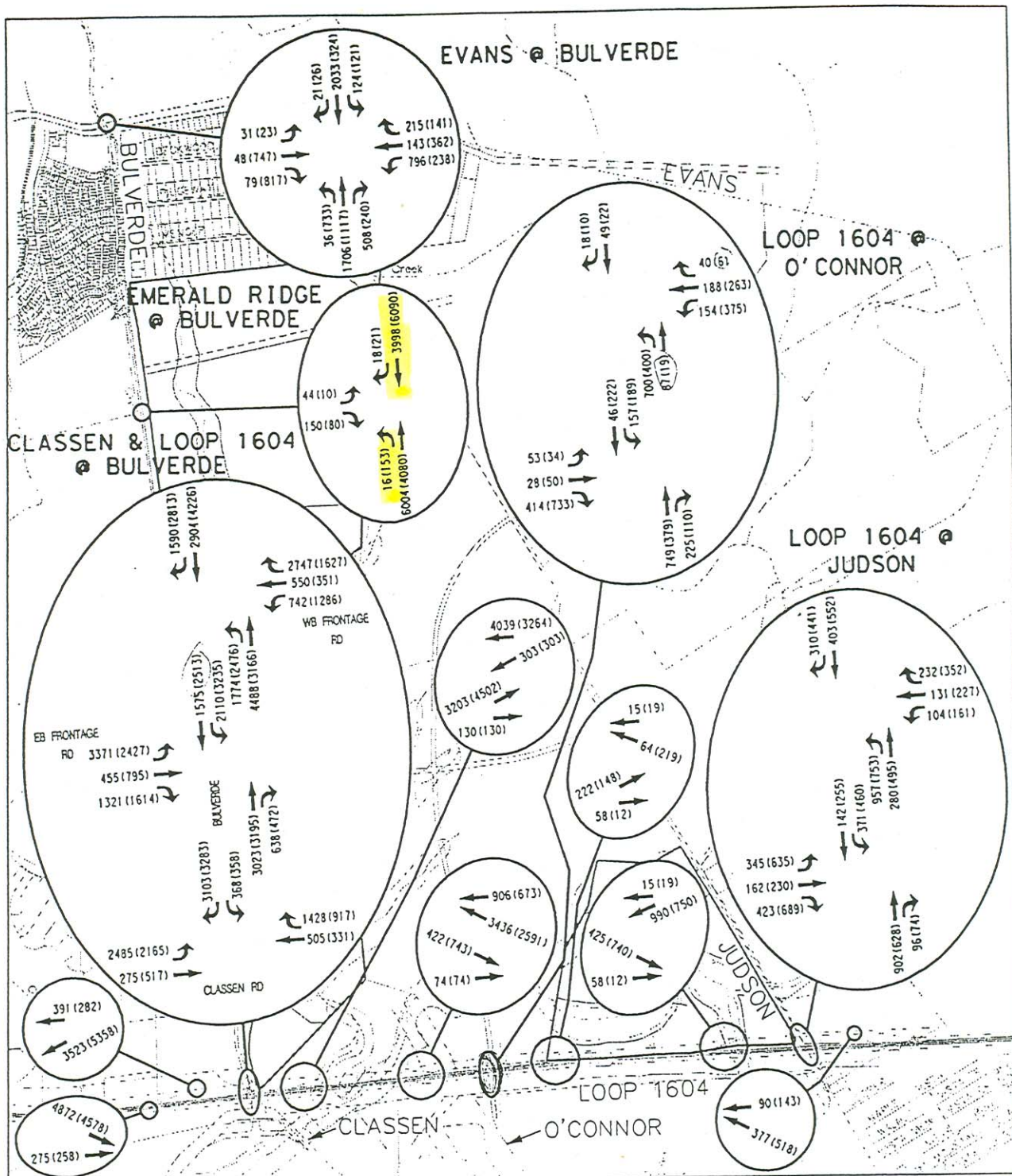


FIGURE 21  
PROJECTED NON-SITE PLUS SITE  
PHASE 3 TRAFFIC  
(YEAR 2010)

LEGEND

← XX(XX) PEAK HOUR VOLUMES A.M.(P.M.)

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**Table 14**  
**Key Intersection Capacity Analysis Comparison**  
**Phase 3 (2010)**

Intersection	Control	AM Peak		PM Peak	
		Non-Site Only	Plus Site	Non-Site Only	Plus Site
O'Connor Rd at Lp 1604 NFR	All-way STOP	E	F	B	B
O'Connor Rd at Lp 1604 SFR	All-way STOP	F	F	F	F
Judson Rd at Lp 1604 NFR	All-way STOP	F	F	B	F
Judson Rd at Lp 1604 SFR	All-way STOP	F	F	D	F
<b>Mitigation</b>					
O'Connor Rd at Lp 1604 NFR	Traffic Signal	A	A	A	A
O'Connor Rd at Lp 1604 SFR	Traffic Signal	A	A	A	A
Judson Rd at Lp 1604 NFR	Traffic Signal	A	A	A	B
Judson Rd at Lp 1604 SFR	Traffic Signal	A	A	A	B

### **ROADWAY AND ARTERIAL CAPACITY ANALYSIS**

Intersections are the critical capacity locations along any roadway or street. However, roadway links are also evaluated according to level of service criteria. The criteria for level of service for multilane highways is based on vehicle densities that can be translated into passenger cars per hour per lane (pcphpl). As illustrated in Table 15 below,

**Table 15**  
**Level of Service Criteria for Multilane Highways<sup>1</sup>**  
**Maximum Service Flow Rate**  
**(pcphpl)**

Level of Service	50 MPH	45 MPH
A	600	540
B	1,000	900
C	1,400	1,260
D	1,670	1,500
E	2,000	1,900

<sup>1</sup> Source: Table 7-1, Highway Capacity Manual.

Due to the potential for blockage by a single vehicle, two-lane roadways, with a single lane in each direction, have an even lower maximum service flow rate due to the impact of vehicles that

travel at lower than the desired posted speed, vehicles stopping to turn left or right, and vehicles turning onto the two-lane roadway. The procedures for calculating level of service for two-lane roadways differs from that for multi-lane, but the following representative values from Table 8-10 of the Highway Capacity Manual, are presented in Table 16, below.

<b>Table 16</b> <b>Level of Service Criteria for Two-Lane Roadways<sup>2</sup></b>	
<b>Level of Service</b>	<b>Average Daily Traffic</b>
A	2,400
B	4,800
C	7,900
D	13,500
E	22,900

<sup>2</sup> Table 8-10, Highway Capacity Manual.

The existing traffic volume along Bulverde Road is 7,500 vehicles per day, thus the roadway currently operates near LOS C. The Psychological Corporation will add 5,700 vehicle trips per day, thus the total daily traffic without the proposed development will exceed 13,000 vehicle trips per day which means that the existing roadway will operate no better than level of service D after opening of The Psychological Corporation facilities. Vehicle operations along Bulverde Road will be further impacted if left-turn lanes and right-turn lanes are not provided at The Psychological Corporation driveways.

<b>Table 17</b> <b>One Direction Through Volumes for Arterial Streets<sup>3</sup></b>				
<b>Level of Service</b>	<b>Vehicles per Hour per Number of Lanes</b>			
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
A	N/A	N/A	N/A	N/A
B	N/A	N/A	N/A	N/A
C	460	1,020	1,550	1,800
D	760	1,640	2,510	2,710
E	840	1,800	3,060	3,320

<sup>3</sup> Table 7-6, Transportation Planning Handbook, Institute of Transportation Engineers, 5<sup>th</sup> Edition, 1999, p. 213, Class II Arterial, assumes ¼ mile spacing for traffic signals.  
N/A = Level of Service not achievable.



As illustrated in Table 17, above, the maximum, one-direction hourly flow rate for a two-way roadway operating at level of service C is 460 vehicles per hour. The maximum one-direction hourly flow rate for four-lane and six-lane roadways operating at level of service C are 1,020 and 1,550, respectively.

For comparison the estimated number of vehicle trips that result from other proposed developments in the area, traffic that grows at the normal rate of traffic growth, traffic generated by Phase 1, and traffic generated by Phase 1 and Phase 2 are presented in Table 18, below.

**Table 18**  
**Projected Volumes for Bulverde Road, North of Loop 1604**

Project Phase	AM Peak Hour			PM Peak Hour		
	NB	SB	Total	NB	SB	Total
Phase 1						
Other TIA's	655	201	856	248	531	779
Non-Site Growth	485	724	1,209	618	465	1,083
Phase 1 Site	3,420	1,318	4,738	1,747	3,413	5,160
Total	4,560	2,243	6,803	2,613	4,409	7,022
Phase 2						
Other TIA's	838	483	1,321	505	760	1,265
2005 Non-Site Growth	587	876	1,463	747	562	1,309
Phase 1 & 2 Site	5,350	2,322	7,672	2,980	5,302	8,282
Total	6,775	3,681	10,456	4,232	6,624	10,856

As illustrated by these hourly and daily volumes of site traffic, additional lanes are required to service the project site. The widening of Bulverde Road to an eight-lane facility would come close to the necessary carrying capacity for the proposed development's traffic. However, the interchange located at Bulverde Road and N. Loop 1604 would not be capable of handling the resulting turning volume of traffic. Furthermore, the ramps would lack the capacity to handle this type of traffic demand. The better solution would be the development of a better arterial network within the vicinity of the development to spread traffic demand over a greater number of arterial routes and over more freeway interchanges.

As discussed elsewhere in this report, the existing Major Thoroughfare Plan provides for a less than desirable east-west arterial network within the project area. This entire area will benefit from the development of an arterial network that improves east-west mobility by providing

alternative routes to US 281. Construction of Gold Canyon Road between Bulverde Road and US 281 would be expected to carry one half of the total Phase 1 and Phase 2 project traffic. At some point in the future, construction of the O'Connor extension will lessen the need for additional capacity on Bulverde Road; therefore, the construction of excess capacity along Bulverde Road is not recommended.